# PRESIDENT'S SECRETARIAT (LIBRARY)

Accn. No	3. 73. 24. E. P.	Class No.	3.4.27		
The book should be returned on or before the date tast stamped below.					
***************************************					
The state of the s					

# ENCYCLOPÆDIA BRITANNICA.

EIGHTH EDITION.

# ENCYCLOPÆDIA BRITANNICA,

OR

## DICTIONARY

OF

ARTS, SCIENCES, AND GENERAL LITERATURE.

EIGHTH EDITION.

WITH EXTENSIVE IMPROVEMENTS AND ADDITIONS; AND NUMEROUS ENGRAVINGS.

### INDEX.

ADAM AND CHARLES BLACK, EDINBURGH.

MDCCCLX.

[The Proprietors of this Work give notice that they reserve the right of Translating it.]

REILL AND CO., PRINTERS, EDINBURGH.

# GENERAL INDEX.

THE following Index contains a full and complete enumeration of the different subjects treated of in the Twenty-one volumes of this Work. It is intended not merely to facilitate reference to the various Articles and Treatises, but to serve the far more important purpose of bringing into one view the varied and scattered information not indicated by respective heads or titles. This is rendered the more desirable, as the plan of the Encyclopædia includes so many general treatises and systems, embracing an immense number of subordinate and collateral topics to which the general title affords no clue. names printed in capital letters indicate the subjects to which separate articles are assigned, and the first reference is to the volume and page where each Immediately following this are the references to the same article occurs. subject occurring throughout the entire Work, either of a general nature, or specifying the particular light in which it is regarded. These references are generally arranged according to their importance, or the fulness of information they afford; occasionally, however, it was thought expedient to follow the order of sequence in the volumes. The entries in the Index not distinguished by capital letters do not form separate articles, but indicate particular subjects occurring under other general heads; they include, for example, all the genera mentioned in the different articles on Natural History, English names of animals and plants, authors and books referred to, names of places, &c.

It was only in this way that the Index could be rendered an adequate representative of the contents of the Work; and while it necessarily gave to

it a great degree of extension, it obviously affords valuable facilities for finding information on any particular subject. A reader, for instance, desirous of learning as much as possible about Scotland and Scottish affairs, will not only find, under the head Scotland, a general view of the history and statistics of the country, but be referred by the Index to many other parts of the Work (such as Britain, Fisheries, Roads, &c.), where a great variety of additional particulars are supplied. Again, as the Sciences are discussed in the Encyclopædia under their general names, the principal details embraced by them are given under such heads as, Anatomy, Chemistry, Entomology, Metaphysics, METEOROLOGY, &c. By consulting the Index, therefore, the student will be saved the trouble of looking through a long treatise in search of information upon particular points; and those, again, who are in quest of information which they were not aware was to be found under such heads, may, in the same way, be enabled to extend their knowledge. The Indexes which follow certain articles (such as those on Natural History, &c.), are here incorporated under one continuous alphabetical arrangement.

It is necessary to observe, that, with the proper character of an Index, that of a Table of Contents is not here combined. For example, under the head Scotland in the Index, no reference is made to the contents of the article so headed in the Encyclopædia; it being presumed that a person making researches about Scotland will commence ascertaining its contents by turning over the pages of that article. But the Index points out other details referring to Scotland which occur under the various heads of Agriculture, Banks, Coal, Fisheries, Iron, Libraries, and so forth.

When an article in the Index contains many references to countries and towns, the names of the latter are frequently arranged alphabetically, in the manner exemplified in Agriculture, Army, Education, &c. The adoption of this plan will save time and trouble to persons consulting the Index. The reference to maps is always given last; but it was thought unnecessary to refer to the plates generally, as the subjects of them are always sufficiently indicated in the articles which they are meant to illustrate.

In such a work as the Encyclopædia Britannica, a summary and digest of its contents like the present is more than usually necessary. Its extent has rendered the compilation a task of much labour. In such an immense number of references, most of them expressed in figures, it is scarcely to be expected that no inaccuracies will occur, but great care has been taken to avoid them, and to render the Index a faithful and complete representation and exponent of the contents of the entire Work. It must be obvious that, in a publication of such extent and variety of subjects, embracing, as it does, the whole field of human knowledge, everything calculated to give ready access to its stores of information, with increased ease of consultation, is of the utmost importance to the practical usefulness of the Work.

JAMES DUNCAN.

OLD MANSE, DENHOLM, April 1861.

## GENERAL INDEX.

#### A—ABA

A, the first letter of the alphabet, II 1a numeral letter, 2-as an abbreviation, 17-as an article, X 750 AA, several rivers so named, II. 2 AACHEN, or Alx-la-Chapelle, II 2, 431. AAGARD (Christian), Danish poet, II. 2. Aahmes, Egyptian kings, VIII 460, 465 AALBORG, a Danish see, II 2-city, ib; VII 748, population, 745 - his works on bees, IX 2. AALEN, in Wurtemberg, II 2-city, ib.mines of, XXI 938. Aalı Pasha, XXI, 376 AALSMEER, town in North Holland, II 3. AALTEN, town in the Netherlands, II 3 AAM, Dutch liquid measure, II 3 AAR, river in Switzerland, II 3, IV 670, XIX. 144, XX. 408, 888—rivers in Germany so named, II 3 AARAU, city in Switzerland, II 3 AARGAU, Swiss canton, II 3; XX 882 AARHUUS, in Denmark, II 3-a bailiwick, 1b —a city, ib —population, VII. 745 AARLANDERVELN, town in the Nother lands, II 3. AARON, Jewish high priest, II 3, XVIII 513—a physician, II 4—Caraite Jew, ıb —martyı, ib. - (Ben Asser). II 4. - (Pietro), II. 4 - (Al Raschid), II 4, 18 Harun al Raschid AARSENS (Francis), II 4 Ass, village in the Lower Pyrences, II 4. AASAR, town in Palestine, II 4. AASI, river, II. 4: XVII. 1. AATYL, town in Syria, II. 4. AB, a Hebrew month, II. 4-a Syriac month, 1b ABA, II 5 See Abæ.

or Albon, king of Hungary, II. 5 ABA HANIFAH, or Hanfa, H 4-mountain in Armenia, ib ABABDE, a tribe of Arabs, II. 5, 219. Abaca. See Manilla hemp. ABACENUM, town in Sicily, II 5. ABACINARE, a kind of punishment, II 5 Abaciscus, in architecture, II. 5; III. 507 ABACK, a sea term, II 5 ABACOT, an ancient cap of state, II. 5. ABACTORS, II. 5. ABACUS, ancient cupboard, II 5-in architecture, ib ; III. 507-arithmetical instrument, II. 5-various applications of the term. 9. ABADDON, II. 9. ABADEH, a Persian town, II. 9. ABADIR, in mythology, II 9 ABJE, a town of Phocis, II. 9. ABAFT, a sea term, II. 9 ABAISSED, in heraldry, II. 9. ABAKA (Khan), Mogul emperor, II. 9. ABAKANSK, mountains in Siberia, II. 9town in Siberia, ib. ABALLABA, ancient Roman castle, IL 9. ABALUS, island, II. 9. ABANA, river, IL 9; XX. 903 ABANCAY, a district in Peru, II 10. ABANDONMENT, in marine insurance, II. 10. XII. 422. ABANO, a town in Italy, II. 10. ABANTES, a people of ancient Greece, II. 10 ABANTIAS, a name of Eubœa, IL 10; IX. 864.

ABA-ABB ABAPTISTON, in surgery, II. 10. ABARAN, a town in Spain, II. 10-a Persıan town, 1b ABARIM, mountains in Palestine, II 10 ABARIS, an ancient sage, II. 10, VIII 187 ABARTICULATION, in anatomy, II 10. ABAS, a Persian weight, II. 10-in mythology, 1b Abasians, a Caucasian tribe, VI. 342language of, XIII 216 ABASSI, a Persian coin, II, 11, Abassides, a dynasty of Saracen princes, II 755, XX 911. ABATAMENTUM, IN law, II. 11. ABATE, II 11 a term in law, II 11. ABATEMENT, in heraldry, IL 11-in commerce, ib ABATI (Niccolo), IL 11. ABATIS OF Abattis, IL 11; IX. 798 ABATON, a building in Rhodes, IL 11. ABATOR, in law, II 11. ABATOS, Island in the Nile, II 11. ABATTOIR, II 11-in Edinburgh, VIII 405-Glasgow, X. 654-Paris, XVII. 283. ABA-UJVAR, a palatinate of Hungary, II. 12 ABAUZIT (Firmin), II. 12. ABAVO, in botany, II 12 ABB, a term among clothiers, II. 12town in Arabia ib ABBA, a town near Carthage, II. 12-Syriac and Chaldee term, 1b. ABBADIE (James), II. 12. ABBAS-BEN-ABDUL-MOTALLEB, Mahomet's uncle, II. 13. - (Schah), kings of Persia, IL 13; XVII 439, —— Pasha, VIII 495 Mirza, XVII 442 ABBAS-ABAD, Persian town, II 13. (Hally), his knowledge of surgery, XX. 815. Abbasees, Egypt subjugated by, VIII. 476, 484, ABBASSA, II. 13. ABBASSIDES, a race of caliphs, IL 13. ABBE, title of, IL 13. ABBESS, II 13 ABBEVILLE, in France, II. 13; XX. 412. - in United States II. 13. ABBEY. II. 13. ABBEYBOYLE, an Irish town, II. 14; V. 260. Abbey Craig, near Stirling, VI. 750, XX. 703. ABBEYFEALE, a village in Limerick, II. 14 ABBEXHOLM, town in Cumberland, II. 14. ABBEYLEIX, an Irish town, II 14. ABBIATE GRASSO, town in Italy, II. 14. ABBITIBREE, in British North America,

TT. 14.

ABBON, or Abbo Cernuus, II. 14

ABBOT, II. 14; XV. 407.

Georgia, IX. 8.

or Abbo Floriacensis, IL 14.

(ROBERT), II 16; XX. 837

(John), his work on the insects of

#### ABB—ABE

ABBOTSBURY, in Dorsetshire, II. 17 Abbotsford, residence of Sir Walter Scott, II 17; XIX. 822, 828. ABBOTS-LANGLEY, a village in Herts, II. ABBREVIATION, II 17-abbreviations in common use, 21—in botany, V 176—arithmetical, III 583, n—characters of, VI 419-in ancient codices, VIII. 42 See Stenography ABBREVIATORS, college in Rome, II 21 ABB's, St, promontory, II 21. ABCHASIA, in Asiatic Russia, II. 21 ABCHERON, or Apsheron, II 22, IV 381. ABDALLA, father of Mahomet, II. 22 Abdallah, a Wahaby chief, III 365-6. - cahph, II. 597, III 363 - head of the Almoravides, II 602 ABDALLATIF, physician and traveller, II. 22; XIV. 456. ABDALMALEK, caliph, II. 23. - II 23 See Avenzoar ABDALONYMUS of Sidon, II 23. ABDALS, eastern fanatics, II 23. Abd-el-Kadır, X. 219, 221, 231 - his resistance to the French at Algiers, II. 574; his surrender to the French, 576his residence at Broussa, V. 681. Abd-el-Azyz, III. 364. Abdelmoumen, II 601. ABDERA, a town in Thrace, II 23 ABDERAHMAN, Moorish sovereigns of Spain, IL 24; XX. 461—Abderahman III., II 24; XX 462. ABDEST, II. 24 ARDIAS of Babylon, II 24. ABDICATION, II 24 Abdollatiph, his anatomical observations, II 755. ABDOMEN, in anatomy, II. 24-regions of the, III. 1—muscles of the, 38—wounds of the, XIV. 431—in insects, IX. 88— in mollusks, XV. 324. See the zoological articles. Abdominal viscera, diseases of, in domes tic animals, XXI 565 ABDOMINALES, an order of fishes, II. 24; XII. 285, 286—their fins and pelvis, III. 90, 91. ABDON, II. 24. ABDUCTION, in law, II 24—in logic, 25. ABDUCTOR, II 25, III. 38, 39. Abdul Medjid, Sultan, XXI 374, 376, 379. - Hamid, Sultan, XXI. 370, 376. ABEDNEGO, IL. 25. ABEL, son of Adam and Eve, II, 25-as a prefix, ib - (CARL FREDERICH), IL 25. (Dr Clarke) on the orang-outang, XIV. 138, 139. - (NIELS HENRI), II. 25; I. 822his discoveries in elliptic functions, ib. (THOMAS), II 25, 42. ABELARD, Peter, II 25-his works, II. 27. ABELIANS, sect of heretics, IL 27, 25. ABELLA, town of Campania, IL 27; IV. - (CHARLES), Lord Colchester, II. 16 —chosen speaker of the House of Commons, V. 592—his resignation, 622 ABELLINUM, town in Italy, II. 27; IV. 322. (GEORGE), archbishop of Canter-bury, II. 15; XX. 887. ABELLIO, II. 27. Abenau, range of mountains, II. 42.

ABENBERG, town in Bavaria, II. 27.

ABEN-BITAR, Spanish physician, II. 27.

ABENCERRAGES, Spanish family, II. 27.

#### ABE—ABI

ABEN-EZRA (Abraham), Spanish rabbi, II 27. ABENHEIM, in Hesse Darmstadt, II. 27 ABENMELECH (Solomon), a Spanish rabbi. II. 27. ARENSBERG, in Bavaria, II 27. ABENSPERG, in Bavaria, II 27. ABERAVON. in Glamorganshire, II. 27; X. 642. ABERBROTHICE, II. 27. See Arbroath. ABERCONWAY, II. 27. See Conway. ABERCROMBIE (Dr John), II 28-on the difference between dreaming and insanity, VIII. 176-on msanity, XIV. 526-weight of his brain, VIII. 264on the amount of fluids within the cranium, XVII. 698. ABERCROMBY (the Hon. Alexander), IL. (Sir Ralph), IL 28-his expedition to Holland, V. 568, 573; X. 114—and to Egypt, V. 583; VIII. 489, X. 120— his death and character, V. 584 - (General), his operations in India, V 541, XI. 497, 498. ABERDARE, in South Wales, II 29. ABERDEEN (OLD), II. 29—univelsity, XXI 478, XIX. 768—docks of, VIII. 75— King's College, XXI. 478—library, XIII. 408. (NEW), II. 30-Marischal College, XXI 480—College hbrary, XIII. 403.

ABERDEENSHIRE, II. 32 — cattle of, 341 -fisheries, IX. 647 - vitrified forts. 791-green-sand and chalk-flints found XIX. 793-system of farming in, XIX. 798-agricultural statistics, 796-798—population, 799 ABERDOUR, town in Fifeshire, II. 34— parish in Aberdeenshire, 34 Aberdovwy, town in Merionethshire, XIV. ABERFELDIE, village in Perthshire, II. 34. ABERFFRAU, in Anglesey, II. 34. ABERFORD, in Yorkshire, II. 34. ABERFOYLE, II. 34. ABERGAVENNY, in Monmouthshire, II. 34. ABERNETHY (Rev. John), II. 34. - (JOHN), surgeon, II. 34; XX. 820. town in Perthshire, II 35 ABERRATION of light, II 35, IV. 21discovery of, I. 685, IV 21; III. 804 -a proof of the earth's motion in its orbit, I. 687. - of the planets, II. 38, in optics, II 39.
spherical, of lenses, XIV. 771; XVI 571-mirrors, 574. ABERYSTWITE, in Cardiganshire, II. 39 VL 234 Abesta, II. 39, Abethell (Mr), on the stability of floating bodies, XX. 156. ABETTOR, in law, II. 39. ABEX, a country of Africa, II. 39. ABEYANCE, in law, II. 40 ABGAR, kings of Edessa, II. 40-alleged message of one of them to Jesus, XII. 761. ABGILLUS (John), IL 40, See Prester John.

ABHEBBAD, lake, II. 40.

ABIA, a town of Messenia, II, 40.

ABIAD (Bahr el), IL 40, 214; V. 689;

Abhorrers, V. 431.

ABI—ABRVIII. 425; XVI. 269, 270, 271; XVII 607; XX. 51-its probable sources, XVI. 271. ABIANUS, a river in Scythia, II. 40. ABIATHAR, a Jewish high-priest, II. 40. ABIR, a Jewish month, II. 40. Abich, on rocks, XV. 131, 133. Abichite, mineral, XV, 103. ABIES, the fir-tree, IL 40. See Fir. Abietineze, natural order of plants, V. 209. ABIGAIL II. 40 ABIHU, a son of Aaron, II. 40. ABILA, a Syrian city, IL 40. ABILDGAARD (Nicolas), IL 41. ABINELECE, kings of Gerar, II. 41. ABINGDON, town in Berkshire, II 41 ABINTESTATE, in law, IL 41. ABIPONIANS, a tribe of American Indians II. 41-language of, XIII 224. ABIRAM, a seditious Reubenite, II. 41. ABISHAI, son of Zeruiah, II. 41. ABJURATION, II. 41—of heresy, ib—oath of, XVIII. 497. ABLACTATION, a method of ingrafting, ABLAIKET, a town in the government of Orel, II. 41. ABLAQUEATION, in gardening, II 41. ABLATIVE, in grammar, II. 42; X. 749.

ABSOLUTE, II. 42. ABLAVIUS, IL 42. ABLAY, in Tartary, II. 42. ABLE (Thomas), II 42. ABLECTI. Roman soldiers, II 42. ABLEGMINA, in antiquity, II. 42. Abluents. See Diluents. ABLUTION, IL 42. ABNER, the cousin of Saul. II. 42. Abnoba, mountains in Germany, II. 42. ABNORMAL, II. 43. ABO, a district and city in Finland, II 43; IX. 585-peace concluded at, XX. 857. ABOARD, the inside of a ship, II 43 ABOLITION, II. 43—of slavery, XXI 441— Slavery Abolition Act, V. 600; XX. 322. See Slavery and Slave Trade ABOLITIONIST, II. 43; XX. 322. ABOLLA, in antiquity, II. 44
ABOMEY, capital of Dahomey, II. 44; VII. ABON, a town and river of Albion, II. 44. Aboni-Teichos, a town of Paphlagonia II 44. ABOO, a mountam in India, II. 44height of, XVII. 644. Sepoy insurrection at, XVI. 311. Aboo-Keer, Egyptian lake, VIII. 429. Aboo-Seer, in Egypt, VIII. 497—pyramids of, 501. ABORIGINES, II. 44. ABORRHAS, a branch of the Euphrates, ABORTION, II. 44; XIV. 428-sanctioned by Aristotle, III 569-among Moham-medans, XV. 304-practised by the aborigines of New Holland, IV. 259. ABORTIVE VELLUM, II 45 Abou-duck'n, bird, XVI, 740 ABOURIR, a town in Egypt, II. 45—battle of, V. 564; VIII 489; X. 109; XVI 135-Napoleon on the consequences of, VIII. 489. Aboulfeda, Arabian historian, II. 45 his description of Hamah, XI. 197. About (M.), on the government of modern Greece, XI. 18. ABOUTIGE, a town in Egypt, II. 46. ABRABANEL (Isaac), rabbi, II. 46. ABRACADABRA, II. 46. ABRADATAS, king of Susa, II. 46. ABRAHAM, II. 46; XII. 766; XVII. 192his communication with God I 466revelations probably made to, not intended for all the people, 474—clavery in the time of, XX. 318—in Syria, 910. (BEN CHAILA), rabbi, IL 47. (NICHOLAS), a Jesuit, II. 47. (Usque), Portuguese Jew. plains of, near Quebec, XVIII. 726 -Montcalm defeated by Wolfe on,

XXL 484

ABR-ABU ABRAHAMITES, MORKS, II. 47. ABRALHOS, islets on the coast of Brazil, Abranchia, order of annelides, XI 300-Abranchia setigera, ib .- A. asetigera, 302 ABRANTES, a town of Portugal, IL 47 ABRASAX, II. 47. ABRASION, II. 47. ARRAUM, a kind of red clay, II 48. ABRAVANNUS, in Galloway, IL 48 ABRAKAS, an antique stone, IL 48.; IV. 486. - genus of insects, IX. 216. - see Abrasax. ABRAZITE, mineral, II 48; XV 77. ABRESCH (Frederic Louis), II. 48. ABRIDGMENT, in literature, II 48. ABROGATION, II. 48 ABROTONUM, a town in Africa, II. 48 ABRUD-BANYA, an Austrian town, II 48. ABRUS, a genus of plants, IL 48. ABRUZZO, a province of Naples, II 48; XX. 236, 255—climate of, 247. ABSALOM, a son of David, IL 49tomb, II 50 - Archbishop of Lund, II 50. ABSCESS, in surgery, IL. 50; XX. 815, 816, 819-modern treatment of, 827in animals, XXI. 558. ABSCISSE, in conics, IL 50; VII. 252. ABSCONSA, IL 50 ABSENTEE, II. 50. ABSINTHIATED, IL 50 ABSOLUTE, IL 50-philosophy of the, XIV. 610. - government, II 50. See Despotism. - Equations, in astronomy, II. 50. number, in algebra, IL 50. ABSOLUTION, II 50. ABSORBENT, II, 51 - medicines, II. 51 vessels, in anatomy, II. 51, 803. See Lymphatics. substances—sulphuric acid. VII. 105; whinstone, oatmeal, 108 Absorption, function of, IL 51-by roots of plants, V. 100-by leaves, 103 of light, Brewster's experiments on, I. 914—polarization of light by, XVI. 647-by uncrystallized 665-by doubly refracting crystals, 666 ABSORPTIONS of the earth, II. 51 Absorus, island in the Adrianc, II. 51. ABSTEMII, in Church history, II 51. ABSTENTION, in law, II. 51. ABSTERGENT medicines, II. 51-dew as an abstergent, VIL 765.
ABSTINENCE, II. 51; XVII. 658—the young least capable of, III. 180-remarkable instances of, ib; VIII. 22, 23. Abstract, II 52—ideas, mathematics, numbers, terms, 1b — in literature, II 52. ABSTRACTION, in metaphysics, II. 52; XIV 590—essential to the geometer and metaphysician, I. 6. ABSURDUM (reductio ad), II. 52. ABSYRTUS, in mythology, IL 52 ABTHANES, an ancient title of honour in Scotland, II 52. ABU-ARISCH, town and district in Arabia II. 53. ABUBERER, Caliph, II. 53; III. 362-the Alcoran arranged by, II. 455. Abu-el-Mansur, Caliph, VIII 478. Abufera, lake in Spain, XX. 488. ABUKESO, II, 58 ABULAHOR, & Turkish town, IL 53. Abul-Casin Mansour. See Firdusi. ABUL-CASSIM, II. 53. ABULFARAGIUS (Gregory), II 53. ABUL FARAJ ALI, an Arabian poet, II. 58. ABULFAZL, eastern historian, II. 53. Abulfeda, XI 197. See Aboulfeda. ABULGAZI (Bayadur), a khan of the Tar-Acanthomera, genus of insects, IX. 130. tars, II. 58. Acanthometrese, zoophytes, XXI. 1007

Abul-Hassan, his dials, VII. 775.

ABUNA, IL 54, 57.

ABU-MANSUR, Arabian astronomer, II. 53.

ABU-ACA ABUNDANT NUMBER, II. 54. ABUNDANTIA, a heathen divinity, II. 54 ABURY, II 54. See Avebury. ABUS, ancient name of the Humber. II ABUSAID (Ebn Aljaptu), Sultan, II 54. Abushahr, Abuschehr. See Bushire. ABUSUMBOL, a town of Nubia, II, 54 ABU-TEMAN, an Arabian poet, II. 54. Abydenus on the deluge, VII. 713 ABYDOS, a city on the Hellespont, II 54 -coms of, XVI 375 a town of Egypt, II 54, VIII 505-tablet of, 505. ABYLA, II 54 ABYSS, II 54-in heraldry, ib. ABYSSINIA, IL 55, 225—Bruce's travels in, V 689-coffee supposed to be originally a native of, XVII 628-height of mountains in, 644 Abyssinian alphabet, II 615—months, VI 673—people, II 220; IX. 352. ABYSSINIAN, a Christian sect, II 58 Aca, a town of Phoenicia, II 58. See Acre. Acacia, in botany, II. 58; V 190—false acacia, XVII. 758—as a timber tiee, XXI. 278. Acbar, XI 479; III. 746-Sindh conquered by, XX. 306. Acca (Saint), II 72. - m materia medica, II. 58. among antiquaries, II 58. ACCAPITARE, in law, II. 72. ACACIANS, sect of heretics, II. 58. ACACIUS (Luscus), II. 58. - Saint, II. 58-other persons so named, 1h. ACAD, II 59. Academical degrees, XXI 447. See Universities ACADEMICS, or Academists, II. 59; XVII. 788. ACADEMUS, IL. 59; XVII 788. ACADEMY, II. 59—first establishment of academies in Italy, England, and France, I. 615—their influence in promoting the fine arts, III 718-inadequate support hitherto given to them in this country, 1b—in ancient Athens, IV. 171, XVII. 788—of painting, XVII. 67, 69, 76, 78, 80, et seq—of arts, at Copenhagen, VII. 847—at Petersburg, XVII 492-Royal Scottish, VIII. 397-Edinburgh Academy, 400-Royal Irish, 225—Royal Academy of Music, London, XIII. 675—Royal Military, at Woolwich, XXI 926-Academies forming the University of France, XXI 491. - Royal, London, XIII. 675-its exhibitions, IX. 453. - French. See French. Acadian iron mines, XII. 542 ACADIE, a name of Nova Scotia, II. 71ceded to England, XXI, 434 Acana, a Grecian measure, II 71. Acenitus, genus of insects, IX. 188. Acalephæ, mollusks, XV. 321. zoophytes, XXI. 995—A. veræ, 999—orders and families of, 1000 ACAMANTIS, an ancient name of Cyprus, TT 71 Acamapitzin, Mexican king, XIV. 700. Acamas, son of Theseus, II. 71. 702. ACANTHA, in botany and zoology, II. 71. Acanthaceæ, nat order of plants, V. 202. Acanthia, genus of insects, IX 163. Acanthias, genus of fishes, XII. 324. Acanthicus, genus of fishes, XII 264. Acanthocephala, zoophytes, XXI, 980, 977, 978. Acanthocephalus, genus of entozoa, XXI. 429 Acanthocinus, genus of insects, IX 146. Acanthoclinus, genus of fishes, XII. 809. Acanthoderma, genus of fossil fishes, XII. Acanthodes, genus of fossil fishes, XII. 334; XVII 125. Acanthodi, fossil fishes, XVII. 123. Acantholabrus, genus of fishes, XII.

Acanthonemus, genus of fossil fishes, XII.

Acanthophis, genus of reptiles, XIX, 71.

#### ACA—ACC Acanthopleurus, genus of fossil fishes, XII 338. Acanthopoda, tribe of insects, IX. 116 Acanthopsis, genus of fossil fishes, XII Acanthoptera, genus of insects, IX. 145 Acanthopteri, fishes, XII. 272—fossil, XVII 127 Acanthopterous fishes, XII. 272. ACANTHOPTERYGIOUS FISHES, II 71. Acanthopus, genus of insects, IX. 200. Acanthoscelis, genus of insects, IX. 85. Acanthospongia, fossil sponges, XVII 92 Acanthurus, genus of fishes, XII 304of fossil fishes, 344. ACANTHUS, in architecture, II. 71-plant, Acanus, genus of fossil fishes, XII 343 ACAPULCO, in Mexico, II. 71; XIV. 723. Acarides, tribe of Arachmides, III, 387. ACARNANIA, in Greece, II. 72-coins of. Acaron, a town of Palestine, II 72. Acarus, genus of Arachnides, III. 388-A. Scablei, XII, 663. ACASTUS, son of Pelias, II. 72. ACATALECTIC Verses, II, 72

ACCAPITUM, a term in ancient law, II 72 ACCEDAS AD CURIAM, II 72 ACCELERATION, in natural philosophy, II. 72-in astronomy, 74-of falling bodies. 72-law of, discovered by Galileo, III. 801-of the fixed stars, planets, and of bodies on inclined planes, II 74-of the moon, I. 814: II. 74-accelerated motions, VIII. 344-accelerating forces, 348-law of, in fluids, XIX. 195. ACCENDONES, a kind of gladiators, II. 74.

Accendentes, II 74. ACCENSI, II. 74 ACCENSION, II. 74. ACCENT, IL 74-Hebrew and Greek, 75 —in music, 76 See Music Accentor, genus of birds, XVI. 756 ACCEPTANCE, in commerce, II. 76. ACCEPTER, II 76; IX. 428, n. ACCEPTILATION, II. 76 ACCESSION, IN law, II 76. ACCESSORY, II, 76—nerves, ib.—in pictures, 1b Acciatuoli (Donato), II. 76

Accordent, in grammar, II. 76-in her-aldiy, ib-in logic, 77. Accidents on railways, XVIII. 795. ACCIDENTAL effects, II 77-colours, ib .point, ib. Accipiter, hawk, II 77. See Hawk. Accipitres, birds of prey, XVI. 726. ACCISMUS, II. 77. Accrus (Lucius), Latin tragic poet, II. 77.

- a poet of the sixteenth century, ACCLAMATION, II. 77-medals. 78. Acclimation, Mr Knight's theory of, XI.

ACCLIVITY, II, 78. ACCOLA, II. 78. ACCOLADE, in chivalry, IL 78.

ACCOURE, II. 79. Account (Benedict), II. 79.

(Francis), II. 79. See P. Aretino. ACCOMAC, a county in Virginia, II. 79. ACCOMMODATION, IL 79-paper, ib.; IX.

ACCOMPANIMENT, in music, II 79; XV. 740-in painting, etc., IL 79. ACCOMPLICE, II 79.

ACCOMPLISHMENT, IL 79. ACCORD, in painting, IL 79.
ACCORDION, musical instrument, IL 79, XV. 708. Accorso (Francis), lawyer, IL 79.

- (Mariangelo), critic, IL 79. ACCOUNT, II 80. ACCOUNTS, Chamber of, IL 80. Account-current, V. 29, 30,

- sale, V. 21 ACCOUNTANT, II, 80. - GENERAL, II. 80.

#### ACC-ACH

Accretion, IL 80. Accroche, in heraldry, II 80. ACCUBATION, II. 80 ACCUBITOR, II. 80. ACCUMULATION, II. 80. ACCURSED, II. 80. ACCUSATION, II. 80. ACCUSATIVE CASE, IL 81; X. 748. ACELDAMA, II. 81. ACENTETUM, rock crystal, II. 81. Acentronura, genus of fishes, XII 315. ACEPHALA, a class of mollusca, II 81; ACEPHALI, various sects so named, II 81 ACEPHALOUS, II. 81—mollusca, XV. 322.

ACEPHALUS, obsolete name of the tape-worm, II. 81. ACER, the maple tree, IL 81; V. 186.

See Maple Tree Accraceæ, nat order of plants, V. 186. Acers, II 81.

ACERENZA, town of Naples, IL 81. ACERINA, genus of fishes, II 81; XII. 276. ACERNO, town of Italy, II. 81.
Acerotherium, fossil rhinoceros, XVII 169.

ACERRA, IL 81. - a town in Italy, II 81. Acervularia, fossil corals, XVII. 97. ACESAS, II. 81. ACESCENT, II. 81. ACESINES, an Indian river, II. 81. Acesius, bishop, II. 82. ACESTES, II. 82. ACESTOR, II 82.

Acestra, genus of fishes, XII. 263. ACETABULUM, an ancient measure, II. 82 -- in anatomy, ib; III. 12, 84 -- in botany, II. 82 genus of zoophytes, XXI, 1009.

ACETAL, II 82 ACETARY, II. 82.

Acetates, II 82-acetate of copper and lead, use of, in voltaic electricity, XXI,

Acetic acid, VI 510, IX. 758—its power of preserving articles of food, 767—from peat, XVII. 359.

ACETOMETER, II. 82. Acetone, VI. 512. ACETOSA, SOTTEL, II. 82. ACETOSELLA, a species of plant, II. 82;

V. 91.

ACHEA, a town in Rhodes, II. 82. Achean League, IX. 497; XIX. 312—coins of, XVI 371—army of, III. 628. ACHEANS, II. 82. ACHEMENES, II 82.

Achsenium, a kind of fruit. V. 134, 187. ACHÆUS, II. 82

ACHAIA, II. 82-coins of, XVI. 371. Achaiæ Presbyteri, II. 83.

ACHACUS, II, 83.
ACHACUS, king of Scotland, II. 83.
ACHALALACTLI, kind of king-fisher, II. 83. ACHAN, II. 83.

ACHANE, II. 83 ACHARACA, a town in Lydia, II. 83. ACHARD (Carl Franz), Prussian chemist, II. 83 - on the force of adhesion 140 - on the influence of electricity on putrefaction and fermentation, VIII. 597—on capillary attraction, XII. 95—his pyrometer, XVIII. 708—his electric

break, XXI, 644. - (C. F.), on bibliography, IV. 705,

ACHARNA, II. 83 Acharnes, genus of fishes, XII. 288. ACHAT, in law, II. 83 ACHATES, IL 83-a river in Sicily, ib. Achatina, genus of mollusks, XV. 373. ACHAZIB, a town of Galilee, II. 83 ACHEEN, in Sumatra, IL 88, 84; XX. 805,

Acheenese, people of Sumatra, XX. 805. ACHELOUS, IL 84; XI, 11. Achene. See Achænium. ACCENWALL (Gottfried), IL 84; XX, 549. ACHER, a river of Baden, II. 85. ACHERN, a city of Baden, IL 85 ACHERNER, star, IL 85; IV. 79. ACHERON, IL 85.

#### ACH-ACM

ACHERSET, an ancient corn-measure, II. ACHERUSIA PALUS, II 85; XX. 239 ACHERY (Jean-Luc d'), II 85. Acheus, genus of mammalia, XIV. 190. Achtar, II. 85 ACHIAS, a genus of dipterous insects, IL 85.

ACRICOLUM, II 85 Achill island, XIV. 370. ACHILLA, II 85.

ACHILLEA, genus of plants, II. 85. ACHILLES, II. 85—character of, XVIII. 100—Tendo Achills, II 85.

- revolt of, in Egypt, VIII 473. - (TATIUS), IL 85 See Tatius ACHILLEUS CURSUS, II 85, ACHILINI (Alexr), IL 85-his anatomical discovenes, 756.

Acutotte, a drug, II. 86. See Anotta, ACHIROPOETOS, II 86 Achirus, genus of fishes, XII. 272. ACHLYS, in Pagan mythology, II 86.

ACHMET, an Arabian author, II. 86. L, II, III, emperors of the Turks, IL 86; XXI 369, 370

- (Geduc), a Turkish general, II 86. Achmetha, city in Media, VIII 370. ACHMIM, a town of Upper Egypt, II 86. ACHMITE, mineral, II. 86. See Acmite. ACHOR, II 86.

Achras, genus of plants, II. 86; V. 199. Achrav, lake in Perthshire, II 86; XVII. 454, 456; XIX. 794.

Achioite, mineral, XV. 89.

ACHROMATIC, II. 86-telescopes, ib.; XVI. 534, 581; XIII 452; XXI 120-list of the most considerable hitherto constructed, 122—doublets, XIV. 775—spheres, 772—microscopes, 775, 777, 778—fluid object-glasses, VI. 14, n. 2 fringes in achromatic object-glasses. XVI 621-triple and multiple objectglasses, XXI. 120

ACHTEL, a German measure, II 94 Achthere, genus of entozoa, XXI 982. ACHTYRKA, a city of Russia, IL 94. ACHYR, a town and castle of the Ukraine, II. 94

ACICANTHERA, in botany, II. 94. Acicula, genus of mollusks, XV. 375. ACICULÆ, II. 94. Aciculdæ, family of mollusks, XV. 375.

Aciculite, mineral, XV. 120 Acidifable metals, VI. 493.

ACIDITY, II. 94.

Acmoron, a species of Adelia, II. 94. Acmos, II. 94; VI. 507-514—organic, 515; volatile, 510, 517; fatty, 517—in sub-stances used for food, IX. 758—mineral acids, XV. 64—their alimentary qualities, VIII. 94—specific gravity of, XII. 89—as poisons, XIV. 435; XVIII. 129—as alteratives, XIX. 611.

ACIDULÆ, II. 94, ACIDULATED, II. 94. Acidulous, II. 94

ACILIUS GLABRIO (Marcus), Roman Consul. II. 94.

Acilius, genus of insects, IX. 101. ACINACES, II. 94.

ACINODENDRUM, a species of Melastoma, II. 95.

Acinos, a species of Thymus, II. 95. ACINUS, IL 95. ACIPENSER, sturgeon, II. 95; XII. 317-

genus of fossil fishes, XIL 338; XVII. 128.

Acipenseridei, family of fossil fishes, XII. 838-species, 351. ACI REALE, a city of Catania, II. 95.

Acis, in mythology, II. 95.

river, II. 95—its source, 192. ACKERMANN (John C, Gottlieb), IL 95. Ackland (William), his collodion pictures on glass, XVII, 547.

ACENOWLEDGMENT, II, 95-money, ib. ACLIDES, a Roman weapon, II. 95. ACLOWA, a species of Colutea, II. 95. Aclysia, genus of arachnides, III. 889. Acute, II. 95.

#### ACM—ACR

ACMELIA, a species of plant, II. 95. Acmite, mineral, XV. 82. ACNIDA, II 95 ACNUA, a Roman land measure, II. 95. ACCEMENTAL II 95. ACCETES, II. 95. Acolhuans, XIV. 699. ACOLUTHI, II. 95. Acolutte (Mr) on a flight of ants at Breslaw, III 265.

ACOLYTHIA, II 95. ACOMINATUS (Nicetas), II. 96. Aconcagua, river and province in Chile, VI 543, 547.

- mountain, XVII. 592; XXI. 603, 604-height of, 644

ACONCROBA, plant, II. 96. ACONITI, II. 96.

Acontrum, genus of plants, II 96; V. 180, 89—poisonous properties of, XIV. 439; XVII 702—fable concerning, VI.

Acontus, a snake, II. 96; XIX. 41. Acontum, a Greek dart, II. 96. ACONTIUS of Cea, II 96. - (JAMES), II. 96,

Acora, in Guinea, XI 89, Acoraceæ, natural order of plants, V. 214. Acoris, an Egyptian king, IL 96. Acorn, II 96; V. 134, 135, 113; XVII.

ACORUS, a genus of plants and corals, II. 96

Acotyledoneæ, a division of plants, V. 216

Acotyledonous plants, V. 76, 84, 141, 180 -germination of, 165-number known, 224—number of fossil species, V. 233number described, XVII. 626. A'Court (Sir William), V. 631.

ACOUSMATICI, II 97. Acoustro, II 97-disciples, ib.-ducts, ib. -vessels, ib

Acoustics, II. 97—theory of vibrations, I. 728-progress of, L 891-principles on which music is founded, 728-different degrees of sensibility in the organs of seeing and of hearing, ib -echo, VIII. acoustic figures, I. 891-Chladni's experiments on, ib.; 892—recent writers on, 893—speaking-trumpet, XXI. 860—hearing-trumpet, ib. See Organ, Trumpet, Harmonics, Music, Temperament, Hearing, Echo. Acos, a town in France, II. 112.

Acquapendente, a town in Italy, II. 112
—Fabricius of, IX. 464. Acquara, a Neapolitan town, II. 118, Acquaria, a town in Italy, II. 113, Acquaviva, a Nespolitan town, II. 113.

Acqui, a province and town in Italy, II. 113. Acquisitiveness, XVII. 562. ACRA, a country of Africa, II. 113-one of the hills on which Jerusalem stood, 1b,;

XII 736, 737. - Japygia, a promontory in the kingdom of Naples, II. 113. Acræa, genus of insects, IX. 207.

ACRAGAS, a town in Sicily, IL 113. See Agrigentum.

Acramphibrya, class of plants, V. 179. Acrasia, II. 113.

Acre, a town in Palestine, II. 113; XVII. -taken by Saladin, VIII. 481taken by the Crusaders, ib.; XVIL 197; by the Mamelukes, ib—taken by Ibra-heem Pasha m 1831, VIII. 494— Bonaparte's siege of, V. 568; X. 112; XVII, 198-attacked by the British in 1840, V. 668.

a land-measure, IL 114. Acreage of the principal crops in Scotland, XIX, 796, 797.

ACRE-FIGHT, II. 115. ACRIBEIA, II. 115. ACRIDOPHAGI, or locust-eaters, IL 115.

ACRISTUS, IL 115. Acrita, a division of annulose animals, TX. 60.

#### ACR-ACT

ACRITAS, a promontory of Messenia, II. 115.

ACROAMA, II. 115. ACROAMATIC, IL. 115. ACROAMATICI, II. 115.

ACROATIC, one class of Aristotle's lectures, II. 115. ACROBATES, ancient rope-dancers, IL 115.

ACROBATICA, II. 115 Acrobrya, class of plants, V 180, 216.

Acrocera, genus of insects, IX. 236. Acroceraunia, II. 116.

ACROCHERISMUS, II. 116

Acrochordus, genus of reptiles, XIX. 63 Acrocidaris, fossil echinoidea, XVII. 100. Acrocinus, genus of insects, IX. 145. ACROCORINTHUS, IL. 116

Acropus, genus of fossil fishes, II. 116; XII. 341; XVII. 118.

ACROGASTER, genus of fossil fishes, II. 116; XII. 343.

ACROGENS, plants, II. 116; V. 80, 84, 180, 216-reign of, in geological times, 234, ACROGNATHUS, genus of fossil fishes, II. 116; XII, 847.

Acroleine, in chemistry, VI. 510.
Acrolerrs, genus of fossil fishes, II. 116;
XII. 335, XVII. 125.
ACROLITE, II. 116

ACROMION, in anatomy, II. 116. ACROMONOGRAMMATICUM, II. 116.

ACRON, a physician, II. 116. ACRONICAL, II, 116.

ACROPOLIS of Athens, II. 116; III. 466; IV 159, 165—its geological composi-tion, XI. 11—sculptures of Phidias on, XVIL 507.

Acropolita (George), Byzantine histo-rian, IL 116. Acropoma, genus of fishes, XII. 279.

Acrosalenia, fossil echinoidea, XVII. 100. ACROSPIRE, II 116. ACROSPIRED, in malt-making, II. 116; V.

Acrostic, in poetry, II. 116. ACROSTICHUM, genus of ferns, II. 116 ACROSTOLIUM, II. 116.

ACROTELEUTIC, IL 116.

ACROTEMNUS, genus of fossil fishes, IL 116; XII. 338. Acroterium, in architecture, III. 507. Acrydium, genus of insects, IX. 159.

Act, II 116—of faith, ib.; XII. 390—in dramatic poetry, II 117—among lawvers. ib.

ACTA Consistorii, Diurna, Eruditorum, Populi, Senatus, IL 117. Actæ, II. 118.

ACTÆA, a plant, II. 118. ACTÆON, II. 118.

-, genus of mollusks, XV. 369. Acteonellæ, fossil mollusks, XVII. 111. Acteonina, fossil mollusks, XVII. 109, 111. ACTIAN games, II. 118. Actiar, bay of, IV 748.

ACTINIA, genus of zoophytes, II. 118; XXI. 985.

Admiaria, zoophytes, XXI. 1004. Actinidæ, zoophytes, XXI. 1004. ACTINOBATIS, genus of fossil fishes, II. 118.

ACTINOCAMAX, II. 118. ACTINOCERAS, fossil cephalopods, II. 118; XVII. 112.

ACTINOCRINITES, a genus of fossil cri nodea, II. 118; XVII. 98. Actinoida, fossils, XVII. 96—P. G. Gosse's

arrangement of living species, XXI. 1004. n. 2. Actinolite, XV. 81.

ACTINOMETER, II. 118; VI. 781; XIV. 638.

Actinometry, XIV. 638. Actinophrys, genus of zoophytes, XXI

Actinote, XV. 81.

Acric, in Roman antiquities, II. 118. Acrico, II. 119—in commerce, chanics, &c., ib. See Dynamics. ACTIONARY, II. 119.

AOTYUM, II. 119—era of, VI. 672—battle of, VIII. 471; XIX. 329. ACTIUS, IL 120.

#### ACT-ADA

ACTIVE, II. 119-verbs, ib ; X. 772. Acron, a village in Middlesex, II. 120. (Sir John) XX. 260, 261.

Actor, in the drama, II. 120-rank of actors in Greece, VIII. 137, 142-in Rome, 142-their fate in England durmg the civil wars, 160-1-effect of the monopoly of the London theatres on, 168-Prynnes' book on, IV. 713-the disrepute in which they are held, XX. 75 emoluments of, XXI. 168. Theatre.

- ancient proper name, II. 120. Actora, genus of insects, IX. 254. ACTORUM TABULÆ, II. 120

Actresses, their first introduction on the English stage, VIII 161; XXI. 170their character in the reign of Charles II. 162-chief actresses of the English stage, XXI 174, 175. See Theatre.

ACTS OF PARLIAMENT, II. 117; IV. 723; XVII. 300.

of the Apostles, IL 118, XIII. 718. -of Pilate, II. 118.

ACTUARIÆ NAVES, II. 120.

ACTUARIUS, a Greek physician, II 120; XIV. 455.—his knowledge of surgery,

- an officer so named, IL 120. ACTUARY, II. 120 Acros, an ancient measure of length, II

ACUANITES, another name for the Mani-chees, IL 120.

Acuba japonica, shrub, V 171, XI. 748. Aculeata, section of the hymenoptera, IX. 193.

ACULEATE, II. 120. ACULEI, II. 120 ACULER, II 120. ACUMINA, II, 120.

Acuna (Christopher d') a Spanish Jesuit,

ACUPUNCTURE, IL. 120. ACUTE, II 120—angle, 1b.—harmonics, 110.
ACUTIATOR, II. 120.

AD, Latin preposition, II. 120-ad bestias -ad hominem-ad ludos-ad metalla-ad valorem, 121.

Adacna, genus of mollusks, XV. 349. ADAGE, II. 121

ADAGIO, in music, II. 121.

ADAIR, town in Ireland, II. 121.

two counties in U.S., II. 121. ADAL, region between Abyssinia and the Red Sea, IL 121.

ADALBERT (Saint), II. 121. Adalia, Turkish town, XIX. 648.

ADALIDES, II. 121.
ADAM, II. 121; I. 449, 458—his original state, XXI. 197—connection between his sin and that of all mankind, 202, 203-his peculiar position in Paradise 205—his representative character, 206. of Bremen, IL 124

(DR ALEX.), Rector of High School, Edin., II. 124—his misapprehension respecting a Roman codicil, VI. 738— on catapultæ, &c., 332—animadversions on his grammar, XX. 783

(Edouard), his improvement of stills, VIII 49.

(MELCHIOR), II. 125. (ROBERT), architect, II. 125—his architectural works, III. 456.

- (WILLIAM), Baron of Exchequer,

ADAM'S Apple and Bridge, II. 127.

Peak, II. 127; VI. 390—height of, XVII. 646.

ADAMANT, IL 128. See Diamond. Adamantine spar, VIL 420; XV. 87. Adamana, African country, II. 214, 229; XIX. 565-Dr Barth's visit to, X. 478.

ADAMI POMUM, IL 128. ADAMIC EARTH, II. 128. ADAMITES, ancient heretics, II. 128.

ADAMS, a township in Massachussets, II. name of six countries in U.S., 1b.

(Damel), V. 553.

(Francis), his translation of the medical works of Paulus Æginets, XX.

#### ADA—ADD

ADAMS (JOHN), II. 128; XXI 424, 435, et seq, 755-XVI 193. his letters of Novanglus

- (John), Mutmeer of the Bounty, XVII. 718

(John Couch), on Laplace's calculations regarding the moon's acceleration, I 815, n .- discovery of Neptune from theory, 827-on the perturbations of Uranus, 830; IV 93, prior to M. Leverrier in his mathematical investigations of this subject, I. 830—his other investigations, 832—prize founded in commemoration of his discoveries, ib.—on the lunar parallax, IV 89-on Saturn, 92.

- (John Quincy), IL 129; XXI. 441 - on Monads, III 199.

(William), on Japan, XII. 689, 690. et sea (W Bridges), his fish-joint for

rails, XVIII. 757-his suspended girder rail, 758, 759. - (Messrs), their work on the genera

of recent mollusca, XV. 329—their nomenclature, ib.—on the habits of the Auriculidæ, 375—on the genus Phorus, 382; and on other mollusks, 385, 388. et seg.

Adams' and Deane's revolvers, XI. 102. Adamson (Patrick), II. 129. ADANA, a town of Asia Minor, II 130. ADANSON (Michael), II. 130-his account of the green monkey, XIV. 140 ADANSONIA, II 121; V. 184. See Baobabtree.

ADAPIS, an extinct quadruped, II. 131. ADAR, a Hebrew month, II 131 ADARCON, an ancient coin, II. 131. See Daric.

ADARME, a Spanish weight, II. 131. Adatais, II 131 Adcordabiles denarii, II. 131. Adcrescentes, II. 131.

ADDA, river, IL 181. ADDECIMATE, II. 131.

ADDEPHAGIA, in medicine, II. 132. ADDER, II 132. See Viper. Adder's grass, a cryptogamous plant, II. 132.

Adder's tongue, genus of ferns, V. 216. ADDEXTRATORES, II. 132. ADDICE, II 132.

ADDICTI, II. 132

ADDICTIO IN DIEM, IL 132. ADDICTION, II. 132.

Addington (Henry), speaker, ib—his administration, 576, IX. 857; XVII 740, 74I—his alteration of the sinking fund, X. 320. ADDISCOMBE COLLEGE, II. 132

Addison (Joseph), II. 132-his opinion of

Hobbes's Treatise on Human Nature, I 42 -his censure of the French authors of his age, 55-value of his essays in widening the circle of mental cultivation, 160, 161-his essays on the pleasures of imagination, 161-his reputation as a metaphysician has suffered by the beauty and clearness of his by the beauty and cusamers of his style, 83, 161—reasons for his being thought superficial, 161—his definition of "fine writing," 162—ments of his style and writings, 1b—his argument for the immortality of the soul, ib—on the care with which Nature disseminates her blessings, 163 — quotation from, concerning ideas, with Dr Blair's strictures thereon, 272—precision of his ideas on colours, 273—on dreams, III. ideas on colours, 173—on dreams, 111.
321, n—on beauty, IV. 538—his onnection with Budgell, V. 725—his
dialogues, VII. 799—Dennis on his
"Cato," and the absurdities that arise from preserving the unity of place VIII. 151; character of that play, 164his hymns, XII. 189—on Damascus, VII. 639—his poetry, XVIII. 124—his want of poetic genius, XX. 71—his connection with Steele, 672-his defective reading, XXI 172—on wit, 894—his quarrel with Pope, XVIII. 334—his birth-place, XXI 879.

#### ADD—ADM

Addison (Charles G), on the runs of Palmyra, XVII 222, 223.

- (Lancelot), II. 136 - a county in Vermont, U.S. II 136. (Thomas), on navigation, XVI. 5. ADDITION, in law, II 136-of place, ibın algebra, II. 490, 494—ın arıthmetic III. 583—of vulgar fractions, 598—of decimals, 600, 602, 603.

Addix, a Greek measure, II 137. ADDLE EGGS, II 137

ADDUCENT MUSCLES, or adductors, II, 137: ADEIA, II 137.

Adela, genus of msects, IX. 219 ADELAIDE, a town and county in Australia.

II 137, IV. 294, 296-climate of, 296. -Madame, sister of Louis Philippe, X 201, 231,

Adelaide's (Queen), College and naval fund, XVI 118

ADELARD, IL 137, X 503. Adelfors, a town in Sweden, II. 137 Adelie, II 137.

Adelium, genus of insects, IX, 132, ADELME, bishop of Shireburn, IL 137, 458 ADELNAU, in Prussia, II. 137.

ADELPHIANI, a sect of ancient heretics II 137.

ADELSBERG, a town of Illyria, II. 137stalactitic caverns of, VI. 68

ADELSOALC, II. 137. ADELSO, II. 137

ADELUNG (John Christopher), II 137
—hst of his works, 138 — his Mithridates, XIII. 197, 199, IX. 343, XVII Luzzes, Alll. 197, 199, IX. 343, XVII 528, Dr Young's review of, XXI. 964, completed by Vater, 529—on the lan-guage of Thibet, XIII 198—on the Celtz, IV 366.

ADEMPTION, in civil law, II. 139 ADEN, a town in Arabia, II 139 III. 361
—plan of the port of, II PL III ADENAU, a circle in Prussia, II. 139. Adenoma, glandular growths, XVII. 691. Adephaga, family of insects, IX. 77.

ADEPTS, II. 139. Adenno, a Sicilian city, II. 139. Adersbach Felsen, II 139. Ades or Hades, II. 140. Adessenarians, II. 140. Adfoo, Egyptian village, VIII. 513.

Adha, a Mahometan festival, II. 140. Adherbal, VI 290; XVI. 350. Adresion, II 140

Adhesiveness, phrenological faculty of, XVII. 562, 673. ADRIL, II 141

ADIABENE, II 141 ADIANTUM, a family of ferns, II. 141; V. 216.

ADIAPHORISTS, II 141. Adie (Alex.), optician,—his sympiezo-meter, IV. 458.

(Alex. J), on the expansion of building materials by heat, XI 268— his pyrometer, XVIII. 705.

ADIGE, a river of Italy, II. 141; XII. 637; XIII 644, XXI 551
ADIMANTIUS, a Greek physician, II 141.
Adinole, mineral, XV. 71.

ADIPOCIRE, II. 141. ADIPOSE, tissue of the human body, II. 141, 787—cells, XVII. 650.
ADIRONDACK, mountains in New York,

II 141; XVI. 213; XXI. 420. ADT, II. 141-of a mine, ib., XV. 226 and n.

ADJAZZO, II 141. See Ajaccio. Adjective, in grammar, II. 141; X. 773; 790—comparison of, 775, 790. ADJOURNMENT, II. 141.

ADJUDICATION, in Scottish law, II, 141. ADJUSTMENT, II. 141.

ADJUTAGE, IL 141; XIL 111-flow of water through cylindrical, 115; through conical, 117, 119.

DJUTANT, II. 142 — Adjutant-General,

142; III. 663. - bird, XVI 799. ADLEGATION, IL 142. ADLOCUTION, II. 142. Admetus, IX. 277.

#### ADM—ADU

ADMINICLE, II 142 ADMINISTRATOR, II 142 Admirabilis sal, II 142

ADMIRAL, II 142; XVI 102—of the fleet, II. 142; XVI 102—Lord High-Admiral, II. 143; XVI. 103—prometions to the rank of, in 1787, V 526— Vice-Admiral, II 145-Turkish Port-Admiral, XXI 382

- in Conchology, II 144. Admiral (Jacob), his work on insects, IX 4. ADMIRALTY, High Court of, II 144 principal officers of, 145
----- Scotland, II 148

code of signals, XX 25 Bay, II. 147-Inlet, 1b -Islands, ib. TV. 264

Admiration, point of, XVIII 685 Admonition, II 148—A. Fustum, ib. ADMORTIZATION, II. 148.

ADNATA, II 148. Adolecera, genus of insects, IX. 106.

ADOLESCENCE, II. 148; XIV. 425. Adolphus (Gustavus) See Gustavus. - (Frederick) king of Sweden, XX. 857.

Adon, name applied to God, XXI 189. ADONAI, II 148; XXI. 189 ADONIA, feasts in honour of Venus and

Adonis, II 148 ADONIC VERSE, II 148 ADONIJAH, a son of David, II. 148. ADONIS, II 148.

a river of Phœnicia, II 148; XX.
904—name of a plant, II. 148. Adonists, II. 148 ADOPTIANI, ancient heretics, II 148.

Adoption, II. 149. ADOPTIVE, II. 149—arms, ib ADORAIM, a city of Judah, II. 149. ADORATION, II. 150.

ADOREA, II 150. Adorf, a town in Saxony, IL 150. Adorium, genus of insects, IX. 150. ADOSCULATION, II. 150. ADOSEE, in heraldry, II. 150; XI 332-3.

Adouan, Arabian tribe, III 348. ADOUR, river in France, II. 150, XVIII.

ADOWA, capital of Tigré in Abyssinia, II 150, 56 ADOXA, a genus of plants, II. 151.

ADRA, a seaport in Spain, II 151. ADRACHNE, a species of arbutus, II. 151. Adrammelech, II. 151. ADRAMYTTIUM, II 151.

ADRASTEA, in mythology, IL 151. - CERTAMINA, games, II 151. ADRASTUS, king of Argos, II. 151; VII. 507.

ADRAZZO, II. 151. See Ajaccio ADRIA, a town of Lombardy, II. 151. ADRIAN, or Hadrian (Publius Æhus),

Roman emperor, II 151 See Hadrian.

Popes so named, II. 151, 152.

(Cardinal), II. 153; XX. 468. ADRIANI (Giambattista), IL 153. ADRIANISTS, a sect of heretics, II. 153.

Adrianople, a city in Turkey, II. 158—treaty of, XIX. 497; IV. 743. ADRIATIC SEA, II 153.

ADRIPALDA, a city in Naples, II. 153. ADROGATION, in Roman antiquities, II.

Adsidelæ, II 158. Adsigor (Peter), on magnetism, XIV. 2. Adstruction, II. 153. ADULA, a mountain in Rhatia, II. 158.

Adularia, mineral, XV. 70. ADULE, a town of Ethtopia, II. 153. ADULLAM, II, 154. ADULT, II. 154.

ADULTERATION, II 154-of food, ib.; IX. 769; XIV.440—of cein, II: 164—of wines, ib.—paper, XVII. 260—papper, 405—of tea, in China, XXI. 87—in Britain, ib.—of tobacco, 295

ADULTERINE, in civil law, IL 155. ADULTERY, II. 155—a ground of divorce in Scotland, XII. 54—its punishment in China, VI. 507—consequences of di-vorce on the ground of, XII 56 various meanings of the term, II, 156.

ADU-AEL Adunati, II. 156. Adur, river in Sussex, XX. 839. ADVANCED, II 156-ditch, guard, II 156 ADVENT, in the calendar, II 156 AD VENTREM INSPICIENDUM, II. 156. ADVENTURE BAY, II. 156. ADVENTURER, II 156 — adventurers, an ancient company of merchants, 1b; XXI 915. Advere, II 156, X. 775,\* 790—in the Egyptian language, XI. 425. ADVERSARIA, II. 156. ADVERSATIVE, II. 156 ADVERSITOR, in antiquity, II 157 ADVERTISEMENT, II 157. ADVICE, in commerce, II. 157-boat, 1b ADVOCATE, II 157—Faculty of Advocates, 158—English VII. 465—Scotch, VIII 395, their library in Edinburgh, ib XIII 400 - (Lord), in Scotland, II. 158 Advocate-General of the Admiralty, II. 147 ADVOCATION, a process in Scottish law, II. 158. ADVOWEE, II 158. Advowson, in common law, II. 158; VIII 744. ADY, a species of palm, IL 158 ADYNAMIA, II 158 Adviamon, II. 158. Advium, II. 158. ADZE, II 158 Az or Æ, dipthong, II 159 ÆACEA, II. 159. ÆACUS, II 159. ÆCHMALOTARCHA, II 159. Æchmodus, genus of fossil fishes, XVII. 126. Ædelforsite, mineral, XV. 76. ÆDES, II. 159 genus of insects, IX. 225 ÆDICULA, II. 159. ÆDILE, Roman magistrate, II 159 ÆDILITIUM EDICTUM, II. 159. ÆDITUUS, II. 159 ÆGADES OF ÆGATES, islands off the coast of Sicily, II. 159, XX. 246. Ægæ, VIII. 389. ÆGAGROPILA, II 159 ÆGEAN SEA, II. 159 Ægeus, king of Athens, II 159; IV. 192. Ægialia, genus of insects, II. 120. ÆGIAS, II. 160 ÆGIDA, a town of Istria, II 160. ÆGILOPS, IL 160. - plant, the supposed original of wheat, XVII 630. ÆGIMURUS, an island near Carthage, II 160. ÆGINA, daughter of Asopus, II 160 —— island, IL 160—coms of, XVI. 371 —sculpture of, XIX. 854 Ægineta (Paulus), suigeon, IL 161; XIV 455; XX 814—Adam's translation of his works, ib. n. 1 ÆGINETABUM FERIÆ, II. 161 ÆGINHARD, secretary of Charlemagne, IL 161. ÆGIPHILA, Ín botany, II 161 Æcrs, in ancient mythology, II. 161. ÆGISTRUS, IL. 161. ÆGIUM, a town of Achaia, II 161. ÆGOBOLIUM, in antiquity, II 161 Ægocera, genus of insects, IX. 210. EGOPODIUM, a genus of plants, II. 161.

EGOSPOTAMOS, river, II. 161.—battle of,
IV. 208.—descent of a stone near, XIV ÆGYPTUS, W. 161. ARINAUTE, IL 161.

ÆLFRIG, a Benedictine monk, IL 161. ÆLIA CAPITOLINA, II 162; XII. 784, 775; XIX. 343. ÆLIANUS (Claudius), II. 162—his natural history, XIV. 124—Gesner's edition of his works, X. 597—on the worship of Apis, III. 297. (TACTICUS), II 162. Ælius Gallus, his expedition into Arabia, TTT. 862.

Ağlıopos, genus of fossil fishes, XII. 342.

ARLTERE, a Flemish town, IL 162.

ÆL-ÆS ÆLURUS, cat desty of Egypt, II. 162. EMILIUS (L Paullus), IL 162; VL 295 - (PAULUS), IL 162. EMOBOLIUM, in antiquity, II. 162. Ænaria. See Ischia. ÆNEAS, II. 162-character of, XVIII 100, 105 - (Sylvius), Pope, II 162. See Pius ÆNEID, II 162, XVIII 105 See Virgil 535 Ænesidemus, his scepticism, XIX. 707. Aenezes, Arab tribe, III. 348. ÆNIGMA, II 162. ÆNITHOLOGIUS, II 162 Æoliæ Insulæ, II 162 rocks ÆOLIC, IL 162-dialect, ib; XIII 210digamma, II 162-verse, 1b EOLIPILE or Eolipile, in hydraulics, II 163, IV 793. ÆOLIS OF ÆOLIA, a country of Asia Minor, II 163-coms of, XVI 375 genus of mollusks, XV. 390-embrvo of, 389. Æolodon, fossil reptiles, XVII 152. ÆOLUS, god of the winds, II 163. Mon, II 163, X 686 et seq Mona, a kind of exercise, II 163 188 Ærinus (F. U. Theodore), II 163, I 987 -his hypothesis to explain the phenomena of magnetism and electricity, 743 on electricity, VIII 529, 530-on the pyro-electricity of tourmaline, 558-on the electricity of melted bodies, 565the inventor of electrical condensers, 614—on magnetism, XIV. 5, 24—his artificial magnets, 70-his theory of magnetism, 91. ÆQUI, ancient people of Italy, II 165 ÆQUIMELIUM, II. 165. Æquoreidæ, family of zoophytes, XXI. 1000 Æra, in chionology, II. 165. See Era, Chronology. ÆRARIUM, II 165 ÆRARIUS, II. 165. ARRIA, the ancient name of Egypt, II. 165. Aerial roots, V. 77. - rocks, XV. 150-classification of, 155. telescope, XXI 119.
AERIE, II. 165. See Airy
AERNEN, a Swiss town, II. 165. AERODYNAMICS, II. 165. See Dynamics. AEROLITE, II. 165—aerolites in the British Museum, XIV. 635-the kaaba at Mecca probably an, I 459; XIV. 378. See Meteorolite. AEROMANCY, II 165; VIII. 54. AEROMETRY, II 165. Aeron, river in Cardiganshire, VI. 234. AERONAUTICA, II. 165 AERONAUTICS, II. 166-Gay Lussac's balloon ascent, I. 939—height attained by MM Bixio, Barral, and Welsh, ib n. 2; XIV 640—Guyton de Morveau's ascent, XI. 165—Messrs Green and Rush's ascent, XIV. 640. See Balloon. AEROPHYLACEA, II 185. AEROPHYTES, parasite plants, II 185. Aerostation, Cavello's work on, VI. 345 AERSCHOT, a city of Belgium, II 185. ÆRTSEN (Peter), II. 185. ÆRUGINOUS, II. 185. ÆRUGO, rust of copper, IL 185 ERUSCATORES, ancient strolling beggars, TT. 185. Æs, II. 185-circumforaneum, ibtre, 1b —uxorum, 1b.—grave, XVL 383 et seg.—used in statuary, XIX. 843. Æsalus, genus of insects, IX. 128. Ascurves, an Athenian philosopher, II s Grecian crator, H. 185—his oration against Demosthenes, VII. 728 schrion, VI. 286.

Æschrion, VI. 286.

ÆSCHYLUS, II. 186; XX. 382, 448, 449-

his improvements of the Greek drama,

VIII. 134\*-effects of his tragedy, the

Eumenides, on the audience, 136-

XVII. 439.

Arrum, a city of Anatolia, II. 209:

AFORT, village near Paris, II. 209.

AFRAGOLA, a Neapolitan town, H 209.

AFRANIUS (Lucius), a Latin poet, H. 209.

ÆS-AFR character of his works, 138; Stanley's edition of them, XX 537 Æschynite, mineral, XV 111. ESCULAPIUS, II 187, XIV. 451-his surgıcal skill, XX. 809 — his temple at Epidatırus, IX. 274. Æshna, genus of insects, IX. 176. Æsop, the fabulist, II. 187; IX 461— Caxton's edition of his Fables, XVIII a Greek historian, II 187 ——— (CLODIUS), Roman actor, II 187. Æsophagus, XXI 564 See Esophagus ÆSTHETICS, II. 188, IV 514, XIX. 108as applied to music, XXI. 29 Æsthiology, comparative, III 94. ÆSTIMATIO CAPITIS, II. 188 ÆSTIVAL, II 188. Estivation, in botany, V. 121.
ESTUARY, II 188; IX 599, 600 — comparative amount of river and tidal water in, XVL 82 ESTUI or ESTII, a people of Germany, II 188; X. 572. ÆSYMNETES, II 188. ÆSYMNIUM, II 188. Aetas, XIII 743 AETH, II 188; IV. 157 ÆTHALIA, the ancient name of Elba, II. ÆTHELING, II 188 ——— (Edgar) See Edgar Ætheling. Æthelmare, II. 429. ETHELSTAN, II, 188 See Athelstan ETHER, II 188; IV 448, 453; XIV. 439 -several fluids so named. II. 189. ÆTHERIAL, II. 189 ÆTHIOPIA, II. 189. See Ethiopia. Æthrioscope, VI. 783; VII. 769; XI. 265; XIII. 345 ÆTIANS, a branch of Arians, II 189. ÆTIOLOGY, II. 189. ÆTION, an ancient Greek painter, II. 189. ÆTITES, or eaglestone, II. 189. ÆTIUS, the Arian, II 189. physician, II. 189; XIV. 455-on the medical virtues of the magnet, XX. 414—on surgery, 813.
—— governor of Gaul, II. 189; X. 2 ÆTNA, II. 189; XVII 589, XV. 218; XX. 243, XXI 605—height of, XVII. XX. 243, XXI OUT INTEREST OF STATE OF S 583. an ancient town, II. 199. Actobates, genus of fishes, XII 328
—fossil, 342; XVII. 119. ÆTOLIA, II 199-coins of, XVI 370. Actoplatea, genus of fishes, XII. 328. AFER (Domitius), Roman orator, II. 200. AFFA, an African weight, II 200. AFFECTION, II. 200; XIV. 579; XIX. 117—Aristotle on, III 561—on the affections which may be the basis of beauty, IV. 542. AFFERERS, in law, II 200 AFFETTUOSO, in music, II. 200. Affiance, in law, II 200. AFFIDAVIT, IL 200 AFFILIATION, IL. 200, XIV. 426 AFFINITY, in law, II. 200-chemical, 200; 140; VI. 440—of languages, XIII. 194 Affirmation, in logic, II 200, XIII. 592, 594. AFFIRMATIVE, in grammar, IL 201. AFFIX, IL 201. Afficates, II. 201.
Affonso (Dom.), princes and kings of
Portugal so named, XVIII. 380, 381. Afforesting, IL 201 AFFRAY, In law, II. 201. AFFRONTEE, in heraldry, II. 201. AFFUSION, II. 201. AFGHANISTAN, II. 201; III 733. AFGRANISTAN, II. 201; III. 703.
Afghans, their war with the Mahrattas,
XI. 480; with the British in 1839, V.
667; XI. 509—their language, XIII.
207, 208—their conquest of Persia,

AFR-AGA AFRICA, II. 209-America probably in part peopled from, 695-ants in, III. 263-Clapperton's discoveries in, 752-complexion of the natives of, VII. 223, 224-British colonies in, 147cotton manufacture in the interior of, 448—love of dancing in, 644—trade with England, VIII 732, 733—languages of, XIII 199, 202, 218, 225; XVII 585 -ethnology of, IX. 351-ancient cir-cumnavigation of, X 461-unexplored regions in, 476—portions of known to the ancients, 464 snowy mountains in, 477—metallic produce of, XV. 248 XVIII. 461-recent discoveries in, X. 477, 478, 479—extent of its coast line, XVII. 585—mean elevation of the surface of, 590-mountain system of, 595, 599—height of its mountains, 644—deserts of, 614—flora of, V 228, XVII 628, 629-mammalia of, 631, 632 -birds, 634-insects, IX. 65-Sebastian of Portugal's expedition against, XVIII. 383—as a receptacle for convicts, 576—reptiles of, XVII. 634, XIX. 31, 35, 52, 53-course of the rivers of, 181 -suicide in, XX 799-sugar-cane, 798-slave-trade, 320-velcanoes, XXI 603 -imports of woel from, 911, prices of, 913—wines of, 886; Pliny's opinion of them, 882—missions to, 422; XV. 271, 276—maps of, II Plate. See Nile, Niger, &c. African Association, II 210; XVI. 265. Company, XII. 818.
Institution, XX. 324. AFRICANUS (John Leo), IL 230. See Leo. (Sex. Julius), II 230.
(Scrio). See Scipio
Afrique, St, a French town, II. 230
Afslagers, II 230. Aft, a sea term, II. 230. After-guard, II. 230 Aftermath, in husbandry, II 230. AFWESTAD, a town of Sweden, IL 230. Afzelius (A), his work on insects, IX. 11.
——Swedish poet, XIX. 700. AGA, II. 230. Aga Muhammad Khan, XVII 441. AGADIR, a sea-port in Morocco, II. 230. AGAIMATA, in antiquity, II 230. Agalmatolite, mineral, XV. 84. Agama, genus of reptiles, XIX. 31. Agamæ or Agamians, family of reptiles, XIX. 31. AGAMEMNON, II 230-character of, XVIII. AGANIPPE, II. 230. AGAPE, love-feast, II 230. AGAPETÆ, II 230. AGAPETUS, II. 231. AGARD (Arthur), antiquary, II. 231. Agardh, on the physiology of plants, V. 71—his division of Algæ, V. 218. AGARIC MINERAL, II 231. AGARICUS, genus of fungi, II. 231; V. 217, 142, 146—lumnosity of, 169. See Mushrooms. Agarista, genus of insects, IX. 209. Agassia, ancient sculptor, FL 281.

Agassiz (M.), on certain families of animalcules, III. 211—on glaciers, X. 636, 637, 640—his arrangement of fishes according to their scales, XII. 216, 832; XVII 640-on fishes, 228, 236, 243 et seq -his works on recent and fossil fishes, XII 332—works on the mollusca, XV. 327-on the echini, XXL 989, 990. (L.), his work on insett embryo-logy, IX. 23. AGATE, II 231; XV 69-moss-agates, II. -jasp and opal agates, ib.—its distinction from calcedony, VI. 67—optical properties of, XVI. 647, 648—agateware, XVIII. 488—as a plate for the knife-edge of pendulums, XVII. 883 AGATHAROEUS, & Greek painter, II. 282. AGATHAROTORS, II. 282. AGATHERMUS, II. 282.

AGATHIAS, FL. 232.

Agathidium, genus of insects, IX. 151. Agathis, genus of insects, IX. 188.

AGATHO, a Greek poet, IL 282.

AGA-AGO AGATHOCLES, IL 232; XX. 900—his wars with the Carthaginians, VI. 284-5-his invasion of Africa, 284. AGATHYRNA, a town of Sicily, II. 232. AGAVE, a genus of plants, II. 282, V. 212

—A. Americana, in Portugal, XVIII. 395 AGBARUS, IL. 232, See Abgar. AGDE, a city of France, IL. 232. AGE, II. 232—of the globe, ib—of man, 233—of animals, 234—of plants, 234 -of the antediluvians, III. 264age, XIV. 425-its influence in predisposing to insanity, 536-its influence on health, XIX. 607. AGEDA, a synod of Jewish doctors, II. AGELA, in antiquity, IL 235, AGELADAS, a statuary of Argos, IL 235; XIX 855. AGELNOTE, archbishop of Canterbury, IL. 925 AGEMA, II. 235. AGEN, in France, IL 285-fall of meteorolites near, XIV. 630. AGENDA, II. 235. Ageneiosus, genus of fishes, XII. 262. AGENHINE, IL 235, Agenois, in France, II. 236. AGERT, II. 236. AGER, II. 237—A. Romanus, XIX. 806— A. peregrinus, ib. AGER PICENUS, an Italian territory, II. 237. AGESILAUS, II 237; XX. 502; XXI, 178 AGGER, an ancient fortification, IL 238. AGGERHOUS, a province of Norway, II. AGGLUTINANTS, in pharmacy, IL 238. Agglutinate languages, XIII. 194. Aggregata, tribe of mollusca, XV. 330. AGGREGATION, in physics, II. 238.

Agha Muhammad Khan, king of Persia, XVII. 441. AGHORI, II 238. AGERRY, in Galway, II. 238-battle of, XII. 491. AGINCOURT, a French village, IL 238— battle of, 1b.; VIII. 688; X. 22—archers at, III. 425, - on the history of art, XVII. 58. Agio, in commerce, II. 239, Agionates, genus of fishes, XII. 247, AGIOSYMANDRUM, IL 239. Agis, kings of Sparta, IL 239; IV. 206 et seq.; XX. 502, - a Greek poet of Argos, II, 240, AGISTMENT, in law, IL 240—tithe of, ib. AGISTOR, a forest officer, IL 240, AGITATION, II. 240—in politics, ib. AGITATOR, II. 240—agitators, ib, AGLAIA, one of the Graces, IL 240; X. Aglaope, genus of insects, IX, 210. AGLAPHON, a Greek painter, IL 240. AGLAR, IL 240. See Aquileis. Aglaura, genus of annelides, XI. 298. Aglaurium, in ancient Athens, IV. 163. Aglis, genus of insects, IX. 212, Agure, a town of Predmont, II. 240. AGLIONEY (John), an English divine, II. 240. Aglossa, genus of insects, IX, 218, AGMEN, in antiquity, II. 240, Agmondesham, town in Buckinghamshire, II. 714. AGNANO (Lago d'), lake near Naples, II. 240 ; XX. 289. AGNATE, in law, II. 241. AGNEL, old French coin, IL 241. AGNES (St), village in Cornwall, II. 241, - one of the Scilly islands, II. 241. AGNESI (Maris Gaetana), II, 241; IX, 677, AGNOREM, ancient heretics, II., 242, AGNOMEN, II. 242, AGNONE, a Neapolitan city, H. 242, Agnestus, trilohites, XVII. 102. Agnus Der, II. 242. AGOBARD, archbishop of Lyons, II. 242. AGON, II. 242. AGONALIA, II 242. AGONALIS CIRCUS, a street in Rome, II. 242; VI. 734.

#### AGO-AGR

AGONISMA, II 242 AGONISTARCHA, IL 242. AGONISTICI, II 242. AGONIUM, II. 242 AGONOTHETA, IL 242 Agonum, genus of insects, IX, 94. AGONYCLITÆ, II, 243. AGORA, II. 243; IV. 162. AGORACRITUS, a Greek sculptor, II. 243. AGORÆUS, II. 243 AGORANOMI, IL 243 AGORDO, town in Austrian Italy. II. 243. Agostin de Musis, engraver, VIII. 800 AGOSTINI (Lionardo), antiquary, II. 243. AGOSTINO, and Angelo (da Siena), II 243 - (PAOLO), II 243, Agouti, in zoology, XIV. 189. Agows, people of Abyssinia, IL 56. Agra, mysteries celebrated at, XV 753. AGRA PROVINCES, IL. 243; XVI. 301 - CITY, II. 244 mausoleum at, XI. 477, and n. 1-sepoy insurrection at, XVI. 309. AGRAM, a palatinate in Croatia, II 244
AGRANIAN LAWS, IL 245; VI. 717; XIX.
303—agrarian agitation of the Gracchi,
317—Niebuhr on, XVI. 261—agrarian region of vegetation, V. 230. Agraulium, in ancient Athens, IV. 163 AGREDA, a district and town in Spain, II. AGBIA, a town in Upper Hungary, IL. 247. See Erlau. AGRICOLA (Cnæus Julius), II. 247-his conquests in Britain, V. 378—XIX. 340, 741—Tacitus' life of, XXI. 3—his subjugation of the Brigantes, 956. - (George), a German physician, II. (JOHN), founder of the Antinomians, II. 248; III. 273. - (Rodolphus), II. 248. AGRICULTURE, II. 248-extraordinary demand for books relating to, in the reign of James I., I. 39, n, 1—culture of the willow, IV. 489—establishment of the Board of, V. 549-agricultural distress of 1821 and 1822, 633; of 1823, 636—deficient crops of 1826, 647—effects of the cotton manufacture on, VII. 454—improved by the crusades, 534 improvement of since 1815, 391-a rational system must be founded on che-mistry, VI 523—agricultural dramage, VIII. 130—insects injurious to agricultural produce, IX. 106, 125, 141, 150, 159, 171, 226—disliked by the Greeks, XI. 15—combination of, with manufacturing employments, XIV. 282—a healthy occupation, 442—employment of capital in, XVIII. 235—distinction between agricultural and manufacturing industry, 246-manufactures necessary for the improvement of, 236-profits in, 252-Society for the Protection of, 642—Ricardo on protection to, XIX -taxes on the rent of land, XXL 48 -turnip-fly, IX. 151; XXI, 549-agricultural statistics of Scotland, XIX, 796, 797, 798—professorship of, in University of Edinburgh, 485—steam-engines for, XXI, 614—Arthur Young's writings on, 960. See Agricultural Chemistry, Draining, Guano, Irrigation, Manures, Corn-laws, Dairy, Veterinary Manires, Cornaws, Dany, Vecennay, Science, Wheat, &c. Agriculture in Afghanistan, II. 207—Aberdenshire, 33—Abyssinia, 55—Antrim, III. 285—Arragon, 393—Argyleshire, 526—Armagh, 614 Asia, 737—Australia, IV. 280, 296—Austria, 813—Ayrshire, 333-Baden, 360—Banffshire, 413—Bedford-shire, 568—Belgum, 622, 624—Bengal, 649—Berkshire, 666—Berwickshire, 679 Brazil, V. 294—Breconshire, 312-Buckinghamshire, 722—Buenos-Ayres, 726—Bute, VI. 26—Caermarthen, 53— Caernarvonshire, 54—Caithness, 62—Cambridgeshire, 115—Canada, 188, 141, 146—Ganary Islands, 168—Gardigan-shire, 234—Carlow, 240—Cavan, 348— Geylon, 398—Cheshire, 529—Chile, 550

### AGR—AGR

-Clare, 755-Cork, VII 372-Corn-—Cumberland, 576—Denbighshire, 735—Denmark, 747—Devonshire, 763—Donegal, VIII 105—Dorsetshire, 112—Down, 123—Dublin, 216—Dum-bartonshire, 236—Dumfriesshire, 237— Durham, 266-Edinburghshire, 409-England, 722—Egypt, 427, 428, 516— Essex, IX. 385—Fermanagh, 515—Fife, 544 Forfarshire, 783 France, X. 245 —Galway, 390—Germany, 588—Glamorganshire, 642—Gloucestershire, 680 -Greece, XI 15-Haddingtonshire, 178, II. 368—Hampshire, XI. 203— Hanover, 212—Hebrides, 278—Herefordshire, 349 - Hertfordshire, 359-Hindustan, 452-Holland, 582-Huntingdonshire, XII 48-Inverness-shire, 439—Ireland, 511 et seq—Italy, 639— Japan, 693—Java, 705—Kent, XIII. 66 —Kentucky, 69—Kerry, 74—Kildare, 82-Kilkenny, 85-Kıncardıneshire, 89 -King's County, 91, 92-Kınross-shire, 95 - Kirkcudbrightshire, 99-Lanarkshire, 175-Lapland, 237-Leicestershire, 320—Lestrim, 328—Limerick, 488
—Lincolnshire, 491—Linlithgowshire, 497 — Lombardy, 648 — Londonderry, 681 — Longford, 684 — Louisiana, 702 — Louth, 702 — Madagascar, 792 — Madeiras, 797—Maryland, XIV. 330—Isle of Man, 244—Meath, 376—Mexico, 716— Middlesex, 808—Monaghan, XV. 409— Moray, 576—Munster, 687—Monmouth, 498-New Brunswick, XVI. 163-New Jersey, 175—New Hampshire, 173—New York, 219—Norfolk, 289—New Zealand, 233—Northumberland, 300—Norway, 324—Nova Scotia 344—Oregon, 706—Oreney, 701—04666 Orkney, 721—Odessa, 406—Ohio, 490—Oxfordshire, XVII. 36—Palestane, 191— Papal States, 242—Pembrokeshire, 374 —Pennsylvania, 396—Perthshire, 458—Poland, XVIII. 158—Portugal, 397— Prince Edward Island, 518-Prussia. 665, 666—Queen's County, 729—Radnorshire, 748-Renfrewshire, XIX. 8-Roscommon, 421—Ross-shire, 426—Ros-burghshire, 455—Russia, 519, 544—Rut-landshire, 555—Savoy, 675—Saxony, 684—Scotland, 796 et seq—Shropshire, XX. 229-The Two Sicilies, 247-Selkırkshıre, 41—Servia, 61—Sligo, 330— Somersetshire, 410—Spain, 489—Staf-fordshire, 530—Starlingshire, 703—Suffolk, 790—Sussex, 839—Sutherland, 842 -Sweden, 861-Switzerland, 889-Tipperary, XXI 287—Tuscany, 394—Tyrone, 408—United States, 425; II. 706 -Virginia, XXI. 598-Waterford, 770-Westmeath, 839—Wexford, 847—Worcestershire, 928—Westmoreland, 842— Westphalia, 844-Wicklow, 859-Wigtonshire, 863—Wiltshire, 869—Wisconsın, 893—Wurtemberg, 938—Yorkshire, 958. See the geographical articles generally. AGRICULTURAL CHEMISTRY, II. 373; VI.

AGRICULTURAL CHEMISTEI, AL 010, 523—Davy on, VII. 671. Agricultural College (Royal), X. 680.

labourers, health of, XIV. 442.

museum, Stirling, XX. 701.

AGRIGENTUM, II. 421; X. 632; VII. 185taken by the Romans, VI. 287; by the Carthaginians, 289—destroyed by Carthalo, ib .- temple of Jupiter at, III. 465-coins of, XVI. 365.

Agrion, genus of insects, IX. 176 AGRIONIA, festivals in honour of Bacchus, II. 421.

AGRIOPHACI, II. 421. AGRIOPUS, a genus of fishes, II. 421; XII.

AGRIPPA (Cornelius), II. 421. (HEROD), IL 421; XIL 778.

II., king of Chalcis, II. 422. (MAROUS VIPSANIUS), IL 422; XIX. 333—Rome improved by, 858.

AGRIPPINI, II. 423; XIX. 387; XX. 45.

daughter of Germanicus, II. 428.

COLONIA UBIORUM, IL 428; VII. -China, 588-Clackmannanshire, 749 Agrocinus, genus of insects, IX. 145.

#### AGR-AIL

Agromyza, genus of insects, IX. 257. AGRONOMI, ancient rural police, II 423. AGROSTIS, a genus of grasses, II. 423. AGROTERAS THUSIA, an Athenian festival, II. 423 Ags See Dax. Agtelek cave, in Gomör, XII 10. Aguacate, gold mines of, VII 424.

AGUAS CALIENTES, a Mexican town, II.

. AGUDO, town in Spain, II. 424. AGUE, II. 424; XII 436 AGUEDA, a Spanish river, II. 424. – (Santa), Spanish village, II. 424. AGUESSEAU (Henri Francois d'), II. 424. Aguilar de la Frontera, II 425 Agurias (San Juan de las), Spanish seaport, II. 425.

AGUILLANEUF, II. 425. AGUILLON (Francis), II. 425. Acumes, a town in Great Canary Island, TT 425

AGUIRRE (Joseph Saenz d'), II. 425. AGULHAS (Cape), II. 425, 212. AGURAH, a Jewish coin, II 425. AGUSADURA, II. 425. AGYEL II. 426.

AGYNIANI, II. 426. AGYRIUM, an ancient Sichan town, II.

AGYRTÆ, II 426. AHAB, king of Islael, II 426. AHALA, II 426 Aham, Dutch liquid measure, II. 3.

AHANTA, a district in Africa, II. 426. AHASUERUS, II. 426; IX. 338; XVII. 434. AHAUS, II. 426

AHAZ, king of Judah, II. 426. AHAZIAH, II. 426, 427 A-HEAD, a sea term, II. 427. AHENOBARBUS. II. 427. AHIGAL, a Spanish town, II. 427.

Аніјан, II. 427. AHIMELECH, II 427. ARITHOPHEL, II 427.

ARJOLI, a city in Silistria, II. 427. Ahmad, founder of the Benec-Tooloon dynasty in Egypt, VIII. 475.

Tebel, VIII. 494
AHMEDABAD, II. 427. See Amedabad
AHMEDPOORA, towns in Hindustan, II.

Ahmed-Shah, XI, 481—tomb of, VI. 168. Ahmet, I., III., III., sultans, XXI. 369, 370,

Ahnaun, kind of wood, XX. 173. Ahrens (G. F.), his work on insects, IX. 7. - (A.), his works on insects, IX. 11. Ahrian, group of rocks, XV. 199.

Ahriman, XXI. 1009. AHRWEILER, a Prussian circle, II. 427. A-RULL, a naval term, II. 427. ARUYS, a town of Sweden, II. 427.

AI, a town in Judea, II 427.
Ai, three-toed sloth, XIV. 190, 121, n.; IV. 260-number of its cervical vertebrae, III. 75-its stomach, 108-intestines,

110-bloodvessels, 112. Alban, a Spanish town, II. 428. AIDAN, II. 428.

- (St), a Scottish bishop, II. 428. AID-DE-CAMP, II. 428-naval aides-decamp to the queen, XVI. 117. Ams. II. 428.

Aiglasmoides, genus of zoophytes, XXI.

AIGLE, II, 428,

L', a city of France, II. 428-shower of stones near, KIV. 631. Argue Perse, a town of France, II. 428.

AIGUES MORTES, a town of France, II, 428. AIGUILLON, a town of France, II. 428. AIGUISCE, in heraldry, II. 428. AIKEN (Dr John), II. 428; IV. 481-on political ballads, IV. 396. Aikenhead (Thomas), condemned for blas-

phemy, IV. 754. Aikin (Dr), on Gilbert Wakefield, XXI. 682.

Queen Elizabeth, VIII. 635, n. AIRMAN (William), painter, II. 428. AILANA, II. 429. See Akabah.

#### AIL-AIR

Ailanto tree, XVII. 762. AILESBURY, II. 429 See Aylesbury. Alha, genus of fishes, XII. 263. AILMER, II. 429 AILRED, historian, II. 429. AILSA, II. 429. Allurus, genus of mammalia, XIV. 154. Aim, in shooting, XX. 215
Aime's artificial magnets, XIV. 76. Am, a department in France, II. 429. Ainshe (Dr), on the Japanese, XIL 690. AINSWORTH, in Lancashire, II, 429 (Dr Henry), a divine, II. 429 (ROBERT), author of a Latin Dictionary, II. 429. AINTAB, town in Syria, II 430 AIR, II. 430-fixed air, IV 737it undergoes by respiration, XVII. 662 extent to which it is vitiated by different illuminating agents, XIX. 615specific heat of, XX. 561 - source of, in ventilation, XXI 540-ingress and egress of, in ventilation, ib -equalization of, in ventilation, ib .- amount of, necessary for ventilation, ib. - purity and temperature of, ib -moisture of, affects ventilation, 541-nature of heating power applied to, 1b -steam apparatus used to heat, ib.—source of movement for the, ib.—varieties of ventilation of, 542. See Atmosphere, Meteorology, Pneumatics.

—— in painting, II. 430—music, ib

in painting, 11. 450—music, 16
——hot, for heating apartments, XIX.
614.
Air-bladder of fishes, XII. 225, 284;
XVIII 51.

XVIII 51.
Air-cayines in plants, V. 73
Air-engines, XX 619.
Air-furnace, X 855
Air-Gun, II. 430; XVII. 516.
Air-Jacket, II. 430.
Air-Pires, II. 430.
Air-gung, II. 451—Cavallo on the, VI 345—double-acting, XII. 178—of a steamengine, XX 578, 655, 668.
Air-Shafts, II. 430.

Air-thermometer, IV 456; XXI 221.
AIR-THREADS, or gossamer, II 430.
AIR-VESSELS, in plants and animals, II.
430; XVII 658.
AIRANI, sect of Arians, II. 480.

AIRANI, sect of Arians, 11, 490.
AIRANIE, town in Lanarkshire, IL 490;
XIII 176.
Anne, two towns in France, IL 490.

Ame, two towns in France, II. 430.
——nver in Yorkshire, II. 430; XXI.
957—bridge over, XII 609; XXI. 956.
Airmoss, skirmish at, V 432.
Ame, or Aery, engle's nest, II. 430.

- (George Biddell), astronomer-royal, I. 849-on tides and waves, 818; XVII. 582 -his account of Laplace's dynamical theory, L 817—on the perturbations by Venus of the earth's motion, 825-his physical and astronomical labours, 849-his introduction of galvanism in recording observations, 850 -his magnetic and meteorological observations, ib.—his formula for M. Foucault's pendulum experiment, 855-on Russell's theory of waves, 889-on the rainbow. 899 - on the phenomena of quartz, 910-on the undulatory theory of light, 917-application of the theory of magnetism to ships' compasses, 990; XX. 27—his proceedings at the Green-wich and Cambridge Observatories, III 816, 817-his observations on the solar disk, IV. 88-on the lunar orbit, 89on the perturbations of Venus and the earth, 90; I. 825—on the satellites of Jupiter, IV. 91—on the orbit of comets, on pendulums and escapements, VII. 9—his improvements in the theory of fluids, XII. 76-means taken by, to determine the longitude of Valentia, XIII. 687, 688—on optics; XVI. 547, 605, and n. 1, 678, 679—his spherocylindrical spectacles, 567—on eypieces for telescopes, XXI. 124—his silvered specula, 182—his zenith sector, 335-his figure of the earth, ib. n.

AIS-ALA AISLE, in architecture, II 430. AISNE, a department in France, IL 430. Aitken (James), incendiary, V. 504. Aitken's blast-furnace, X. 359. AITOCZU, river in Lesser Asia, II. 430. AITON (William), botanist, II, 430-his Hortus Kewensis, VIII. 201. AIUS LOCUTIUS, Roman deity, II. 431. AIX, city and arrondissement of France. II 431-amber found at, 656-population, X. 277—academy of, XXI 491. an island, II 431—river, 1b. AIX-LA-CHAPELLE, a district and town in Prussia, II 431, XIX 145-treaty of, V 462; XII 653—congress of, m 1818, X. 179; XXI 743. AJACCIO, in Coisica, II 431; VII 417. AJALON, IL 431. AJAN, country of Africa, II. 432. Ajanæa, genus of zoophytes, XXI 1006. AJAX, IL 482. AJMERE, II. 432--temples at, XI 477. AJOFRIN, a town of Spain, II. 433
AKABAH, Gulf of, II 433, XVIII 817.
Akassa, river of Morocco, XVI 392. AKEN, a Prussian town, II 434. AKENSIDE (Mark), IL 434 - his poetry, XVIII 124. Akera bullata, teeth of, XV. 373. AKERBLAD (Jan David), II 435-on the Rosetta stone, XI 378-9. AKERMAN, in Russia, II. 435. ARHALIES, religious warriors of the Sikhs. II. 435. ARHALZIKE, II 435. ARHALZIKH, a city of Georgia, II 435attack on, by the Russians, XIX. 496 AKHBAR, or Achar, Mogul emperor of Hindustan, IL 435, 53. ARHISSAR, II. 435; VII. 505.
ARHIMETSORET, II. 435; VII. 505.
ARITAR, II 435, VII. 505.
ARITAR, TADDI, II. 435. Akıs, genus of insects, IX. 129 AROND, II. 435. AKYAB, II 435 AL, Arabic particle, II. 436. AL or ALD, a Saxon prefix, II. 436. ALA, II. 436 ALE, II 436. ALABAMA, II 436; XXI. 419-debt of, 428 —newspapers of, XVI 195—production of wine in, XXI 888 Alabandine, mineral, XV. 121. ALABARCHA, II. 436. ALABASTER (William), II 486. - a vase, or liquid measure, II 437. - mineral, IL 437; XL 172, XV. 96, 148 - origin of the name, 148, n sculptured slabs of, at Nineveh, XVI. 276, 277—photography on, XVII 551. Alabastrine photographs, XVII 552. ALABASTRUM DENDROIDE, II. 487. ALACRANES, II. 437. ALADINISTS, a Mahometan sect. IL 437. ALADSCHAHISSAR, IL 437. ALADULIA, an Asiatic province of Turkey, II 437. Alaejos, a Spanish town, II. 437. Alagon, a Spanish town and river, II. 437 ALAIN (Chartier), II. 437. ALAIS, in France, II 437. ALAJAR, a Spanish town, IL 437. ALAMAGAN, island, II 487. ALAMANNI (Luigi), II. 437. Alamos (Balthasar), II. 438. Alam (Cardinal William), II. 438. Alamo, archipelago of, II. 438, IV. 403; XIX. 552. Alangiaceæ, nat. order of plants, V. 192. Alani, X. 577; XII. 26—their irruption into Spain, XX. 459. Alanjar, a Spanish town, II. 438. ALANT, in heraldry, IL 438. Al Araf, II. 438. Alaria, fossil mollusks, XVII. 109. Alariaceæ, nat. family of plants, V. 195. ALARIO I, II. 488—his invasion of Greece

IV. 173-Rome occupied by, XIX. 868.

under, VI. 748.

ALARM, II. 439-bell, ib.

ALARO, a town in Minorca, II. 439.

- II., compendium of laws prepared

ALA—ALB Alarum clocks, VII. 17. ALASCANI, an anti-Lutheran sect, IL 439 ALASCO (John), IL 439. ALA-SHER, II 439; XVII. 511. ALASHKA, II. 439. ALASSIO, II 439. ALASSONA, a Turkish town, II. 439. ALATAMAHA, river in North America, IL ALATRIUM, a town in Italy, II, 439. ALAUDA, genus of birds, IL 439; XVI. 759-one of Cæsar's legions so named, II 439 Alausa, genus of fishes, XII 237. ALAUTA, a Turkish river, II 439. ALAVA, in Spain, IL 439. ALAY, IL 440. ALAYOR, a Spanish town, IL 440. ALB, IL 440. Alba, in Piedmont, IL 440. an Italian city, II 440. DE TORMES, IN Spain, II. 440. Longa, in Latium, II. 440. Duke of, XI. 565, 566 et seq. Albacete, a Spanish province, II. 440 Albahurim, II 440 71. ALBAN (St), protomartyr of Britain, II. 440. Albanenses, II. 440 See Albigenses. Albani, II. 440; VI. 74. (CARDINAL G. F), Pope, IL 440 (FRANCESCO), Italian painter, II 441, XVII. 78. ALBANIA, II. 441; XI. 13-invaded by a Turkish army, 23-inhabitants of, IX. 351, 388—language, 390; XIII 215-vineyards of, XXI 886. - ın Asia, II 444. Albanians in Greece, XL. 14, 15-Illyria, XII. 363-in Turkey, XXI. 378. Albano, city, II. 444-lake, 1b. Neapolitan town, II. 444. painter, XVII. 73. ALBANS (St), II. 444; XI 359-battle of, VIII. 690—early printing at, XVIII. 538. - (Hugh de), painter, XVII. 77, n 1. ALBANUS MONS, II 444. ALBANY, town in New York, II. 444; XVI 217, 220-1 allway from, XVI 220. station of Hudson's Bay Company, district at Cape of Good Hope, II 444 : X. 713. - (Dukes of), regents of Scotland, XIX. 757, 767. - Earl of, XIX. 760, 761. ALBARIUM OPUS, II 445 422. ALBARRACIN, in Spain, II. 444. Albategni, Arabic prince and astronomer, II. 445; III. 794, 795.
Albati Equi, II 445. 267 ALBATROSS, IL 445; XVL 812; XVII 633. ALBAYDA, in Spain, II. 445. ALBAZIN, town in Greater Tartary, II ALBEMARLE, II. 445. See Aumale. - a county of Virginia, II. 445. - SOUND, II. 445 - island, X. 367. (George), Duke of. See Monk. Albenga, an Italian seaport, II. 445. Alberique, in Spain, II 445. ALBERONI (Julius), IL 445. ALBERT, II. 445. Margrave of Brandenburg, II. 445. of Saxony, on eronautics, II, 167. (Prince-Consort) of Saxe Coburg-Gotha, his marriage with the Queen, V. 667-sum voted to, ib. of Mecklenburg, king of Sweden, Emperor of Austria, XX. 884. ——— (Charles), XII. 657, 658.
ALBERTI (Leon Battista), II. 445; III 451 on medical jurisprudence, XIV.

Albertia, genus of entozoa, XXI. 978

of animals, XIV. 124.

ALBERTUS MAGNUS, IL 445; XIV. 458 his pretensions to the art of flying, II

on sal-ammoniac, 720—his history

ALB-ALC Albesia, II. 446. Albi, in France, II 446.
Albigenses, II. 446; persecution of, XL 616; XII. 386, 387; XXI 508. Albigeois (L), in France, IL 446. Albin (Eleazar), his work on insects, IX. 4 his work on spiders, III. 390-on birds, XVI 726. Albini, II. 447. Albinism in animals, XIV, 134. ALBINOS, IL 447. ALBINOVANUS (C. Pedro), II. 448. ALBINUS, IL 448. - (Bernhard Stegfred), physician, II. 448- his anatomical labours, 764, 766-his arrangement of the muscles, III 38. ---- (CLODIUS), II 448. ALBION, II. 448; V. 372. - (NEW), II. 448. printing-press, XVIII. 558. Albione, genus of annelides, XI. 307 ALBIREO, star, II 449. ALBIS, ancient name of the Elbe, IL 449 Albite, a species of felspar, II 449; XV. Albogalerus, II. 449 Alborn, king of the Lombards, II. 449; XII. 641, XIII 688. AL BORAK, II 449. ALBORAN, ISland, II. 449. Albox, a town in Spain, II. 449. Albrecht (Achilles), elector of Brandenburg, XVIII. 647. Albrechtsberger (J. George), musician, II. 449. Albric, II 449. Albucasis, physician, XIV. 457—his know-ledge of surgery, XX. 815, 816. ALBUERA, II. 449—battle of, V. 609. ALBUFEIRA, a Portuguese town, II 449. Albufera de Valencia, lake, II. 449, ALBUM, II. 449. - græcum, XVI. 460. ALBUMAZAR, Arabian astronomer, II. 449. ALBUMEN, II. 449; XVII. 654; XIX. 610. - (animal), IX. 757-its use in clari-(animal), 1.2. 101—118 use in cuarri-fying, VI 755—its qualities as an ali-ment, VIII. 19—of eggs, VIII. 418— albumen process in photography, XVII. 546—albuminous degeneration, 690, 696. (vegetable), IL 381; IX. 757; V 140; VI. 519. Albuminous seed, V 140. ALBUQUERQUE, a Spanish town, II. 449. Albury mountains, XVII. 420—coal in, ALBURN, IL 449 ALBURNUM of trees, II 449; V. 81; XXI Alca, genus of birds, XVI 810. ALCEUS, Grecian poet, II. 449. - comic poet, II. 450. epigrammatic poet, II. 450. ALCAICS, verse and ode, II. 450. ALCAID or Alcalde, II 450; XX. 467. ALCALA DE GUADIRA, II. 450 - de Henaies-de los Gazules-la Real, Spanish towns, ib. - Hebrew bible, IV. 697; II. 450, XXI 951. - university of, XIII. 805. ALCALY, or Alcalı, II 450 See Alkali. ALCAMENES, Athenian sculptor, II. 450. ALCAMO, a city of Sicily, IL 450. Alcan, VII, 315. ALCANIZ, a Spanish town, IL 450. ALCANNA, or Alkanna, IL 450. ALCANTARA, in Spain, II 450-knights of, 1b. 619. ın Brazıl, XIV. 294. river in Sicily, XX. 244 ALCARAZ, a city in Spain, IL 451. Alcantazas, cooling vessels, VII 100. Alcandere, a Spanish town, II. 451. Alcanala, a Spanish tax, II. 151. ALCAZAR de San Juan, II. 451. - DO SAL, II. 45L KEBIR, II. 451. - (Luis de), Jesuit, II. 451. ALCEDO, genus of birds, IL 451; XVI.

430.

#### ALC-ALD

ALCESTIS, IL 451. Alcetas, king of Epirus, IX. 277. Alcetre (John), his letter to Henry V. on ship-building, XX. 122 Alchader, rabbi, II. 451. Alchamists, VI. 437—their notions on physical subjects, 448-first to explore new paths of science, ib—their fan-cies respecting dew, VII 766—names of the principal, II 451—Sir I Newton's study of their works, XVL 208their objects, II 452-in Persia, XVII

ALCHEMY, II 451 See Alchemists Alchemy, Italian jurist, II 452. Alchemates, II. 452, IV 206, n 2, 207 et seg.—his death and character, 209, n 1 conduct of Socrates towards him, XX. 375-his respect for that philosopher, 378 ALCIDAMAS, II 452.

ALCIDES, II 452. ALCINOUS, II. 452. Alciopa, genus of annelides, XI. 298 Alciphron, II. 452 Alcira, a Spanish town, II. 452. ALCMEON, II. 452. ALCMAER, a Dutch city, IL 452. Alcman, Greek lyric poet, II 452. Alcmanian verse, II. 453. ALCMENA, IL 453 ALCOBAZA, a town of Portugal, II 453.

ALCOCK (John), bishop, IL 453 ALCOENTRE, a town of Portugal, II 453 ALCOHOL, II. 453, VI 506 et seq; IX 756, 760, VIII 47; XIX. 611—boiling point of, VIII, 50—how to inflame it by electricity, 590—its vapour unlikely to supersede steam as a moving power IX. 414-mode of freezing it, ib -its specific gravity, II. 453; XII 89-produced by the fermentation of wort in brewing, V. 329—its narcotic properties, XIV. 439—its effect on the nervous sys-

tem, XVII. 699-in wine, XXI. 889, 890 -in thermometers, 221. ALCOHOLIZATION, II. 453. ALCOR, star, II. 453. ALCORA, a town in Spain, II. 453 ALCORAN, IL 453-Marracci's edition of,

XIV. 314. See Koran.

of the Cordeliers, IL 456. Arcov, a Spanish city, II. 456. ALCUM, II. 456, 61—his version of the Bible, IV. 701.

Alcyonaria, zoophytes, XXI. 1004 ALCYONIA, zoophytes, II. 457 Alcyonidæ, zoophytes, XXI. 1004 Alcyonium stagnum, lake, II. 457. ALCYONIUS (Peter), II. 457. ALDBOROUGH, a town in Yorkshire, II. 457

ALDEBARAN, star, IL 457, IV 79, 82. ALDEBURGH, a town in Suffolk, II 457. ALDEGREVER (Heinrich), engraver, II 457. Aldehyde, in chemistry, VI 509, ALDER tree, II. 457; V. 208; XVII. 759.

765-strength of the wood, XX. 757, 758-as a timber tree, XXL 278. - (Mr), his work on the mollusca, XV. 327.

ALDERHOLM, island, H. 457. ALDERMAN, II. 457.

ALDERNEY, II. 457—harbour of refuge at, XI 222—breed of cattle, XII. 730—race of, XVII 580.

Aldershott, military camp at, XL 204. Alderston Melon pit, XI. 733. ALDHELM (St), bishop, II. 458. ALDINE, II. 458; XIV. 292. See Aldus. ALDPORT, IL 458.

ALDRED, bishop, II. 458. ALDREDK (Dr Henry), English divine, II.

(ROBERT), bishep, II. 459. Aldrisi, VIII, 411. ALDEOVANDUS (Ulysses), II. 459 — his work on insects, IX. 2—on animals, XIV. 124 — his MSS,, XIII. 418—on II. 459 - his ornithology, XVI. 725. ALDSTON-MOOR, II. 459-lead mines of,

VII. 577; XV. 243.

ALCEDO (Antonio de), II. 451. ALCESTER, IL 451; XXL 738, 739.

#### ALD-ALE

Aldus, his editions of the Greek classics, IV 710; XVII 522-his correction of the press, XVIII 542 See Manuzio, ALE, IL 459; V 332; IX. 759—ale-conner, II 459—ale-silver, 560—brewing of, 318, 332-pale, or Indian, 332home-brewed, 334-Scottish, ib., XIX. nome-orewed, 334—Scottish, ib., XIX.
805—bitter, V. 333—quantity exported
from United Kingdom, 335—its
average specific gravity, XII. 89—of
Nottingham, XVI 339—of London, XIV. 809 - ale-measures, XXI 808of Edinburgh, V. 334

ALEA, II 460. ALEANDRO (Geromino), II 460. ALECTO, II. 460; X. 352 - fossil animals, XVII 98. ALECTORIA, II 460 ALECTOROMANTIA, II 460 Alectors, biids, XVI 785 A-LEE, a sea term, II. 460. ALEGAR, II 460. ALEIUS CAMPUS, II 460 ALEMAN (Louis), archbishop, II. 460.

(MATEO), II. 460—his romance XIX 286.

ALEMANNI, a German tribe, II 460; X 2, 576—their invasion of Italy, XIX. 349; of Helvetia, XX 883.

Alemannic language, X. 587.

ALEMBERT (Jean le Rond d'), II 460-his general survey of the various departments of human knowledge, founded on erroneous views, I. 1-his unsuccessful delineation of an encyclopedical tree, 3-quotation from, on his division of human knowledge, 3, 4—objections to this, 5, 6—his definition of poetry, 4, and n. 1—his identification of imagination with abstraction, 6-his diffidence in propounding his views, 7, n — his encyclopedical tree only an amplification of Bacon's sketch, 7, 8-character of his preliminary discourse on the different branches of knowledge, 10-quotation from, on the bias of the mind from habits contracted in infancy, 64-his erroneous views on the necessary existence of space and time. 142, n -his mathematical researches, character of his writings, 694—ex-panded the process of integration relative to partial differences, 716—dis-covery of the principle on which he framed his Treatise on Dynamics, 720, VIII. 364-sketch of his life and cha racter, I 720, n-treated of hydrodynamics with his usual originality and depth, 724-on achromatic glasses, II -his labours in astronomy, III. 809 -his declaration about the election of an associate of the Academy of Sciences. 806 -on the resolution of forces, VIII 335-his connection with Diderot, 14-Condorcet's eloge on, VII. 238-on the figure of the earth, IX, 552-on the motion of fluids, XII. 72-on imitative music, XV. 737-on the Provincial Letters of Pascal, XVII. 325, 330.
ALEMBIC, II. 462.

ALEMBROTH, II. 462.

ALENÇON, in France, II. 462-Jace, XIII.

ALENIO (Gulioi), a Jesuit, IL 462, ALENQUER, a Portuguese town, IL 462, ALENTEJO, in Portugal, II. 462. Aleochara, genus of insects, IX. 104. Alepsaurus, genus of fishes, XII. 248,

Alepocephalidæ, family of fishes, XII.

Alepocephalus, genus of fishes, XII. 255. ALEPPO, II. 463—pachalic of, XX. 905— plagues in, XVII. 748, 749, 751—tomperature, XX. 907—taken by Saladin, VIII. 481

ALES (Alexander), II. 468. ALESSANDRI (Alessandro), lawyer, II. 464. ALESSANDRIA, a city of Italy, IL 464. - a province of Pledmont, II. 464; XIX. 640.

ALESSI (Galeazzo), architect, II. 464. Alestes, genus of fishes, XII. 246.

#### ALE-ALE

ALET, a town of France, IL 464. Aletes, kings of Corinth, VII. 367. ALEUROMANCY, IL 464.

ALEUTIAN ISLANDS, II. 464; XIX. 552-height of mountains in, XVII. 646volcanoes, 589, 590.

ALEXANDER THE GREAT, II. 466judge of ment in painting, III 281, XVII. 56—educated by Aristotle, III 453—his army, 628—era of, VI 672—enlarged the boundaries of geographical knowledge, X. 462; III 696— Egypt under, VIII. 467—his expedition to India, XI. 478, III. 752—his birth, XIII. 764-military exploits and conquests, 766 et seq — his death and character, 772 — his will, 773 burial, 774-Græco-Macedonian empire under, XI 542—change in the Greek comage produced by, XVI 355, 369monarchy founded by, XV. 412—his invasion of Persia, XVII 434—his rule ın Syrıa, XX. 910 — Tyre taken by, XXT 405.

of Aphrodisias, II. 466.

of Hales, II. 466.

of Tralles, IL 466. See Trallianus - Balas, II. 466

JANNÆUS, II. 466. SEVERUS, Roman Emperor, II 466 -reign of, XIX. 347.

 V (Pope), IL 467. VI (Pope), IL 467

VII (Pope), IL 467, 541 St, bishop of Rome, IL 467

I, king of Scotland, IL 467, XIX 751

- II, king of Scotland, II. 467, XIX. 753

- III., king of Scotland, II. 467, XIX. 753

(NOEL), II. 467 (WILLIAM), earl of Stirling, II.

468 . IV. 469. (PAULOVICII), Emperor of Russia, II. 468—reign of, XIX 491—Peters-burg improved by, XVII 487.

II., Emperor of Russia, XIX. 507. of Pheræ, XXI. 178

Mount, gold-diggings at, IV 289,

king of Epirus, IX. 277. — hieroglyphical characters of the name, XI 390

— (Piof), on the prophecies of Isaiah, XII 625

Alexandra, queen of the Jews, XII 770. ALEXANDRETTA, II. 469 See Scanderoon ALEXANDRIA, II. 469, 224, VIII. 496 academy of, 60-the depository of the sciences, under the Ptolemies, 751-era of, VI. 670-museum, III. 789; II 475 destruction of the temple of Serapis in, VII. 310—embellished by Ptolemy Soler, VIII. 468—library of, 475; II. 733; XIII. 381—Pharos of, 463—battle of, in 1801, V. 584; VIII. 489—siege of, by the Muslims, 475—commerce, ancient, VII. 185; XI. 460; modern, VIII. 517 - Napoleon's opinion of its site, 420, n. 3—railway from, to Cairo, XX. 789—other ancient cities of that name, II 473.

- modern, II. 471. a city of Virginia, II. 473; XXI.

Russian city, II. 473.

— in Louisiana, XIII 699.
ALEXANDRIAN MS., II. 474; XIII. 412.
— School, II. 475 — anatomical, 751—surgical, XX. 811—astronomical, III. 789-mathematical, X. 500-o medicine, XIV. 452—philology advanced by, XVII. 518—Platonists of, 793 end of this school, X 502-poetry of the, XVIII. 103.

or Alexandrine verse, II 476. Alexandrine Library, at Rome, XIII. 412. ALEXICACUS, II. 476. ALEXIN, in Russia, II. 476. ALEXIS, comic poet, IL 476.

a Piedmontese, II. 477.
Czar of Russia, II. 477.

#### ALE—ALG

Alexis, clairvoyant impostor, XX. 438.

ALEXIUS I, II. 477.

Comnenus, VII. 316, 317.

Strategopulus, VII 318. ALEYN (Charles), II. 477.

ALFAQUES, a Spanish seaport, II. 477.

Moorish clergy, so named, II. 477. ALFARABIUS, eastern philosopher, II. 477. ALFARO, a Spanish town, IL 477

ALFERGAN, Arabian astronomer, II. 477; III 794

ALFET, II 478.

ALFIERI (Vittorio), II 478-his tragedies, VIII 147-his opinion of Washington, XXI 765

Alfoeres, people of Celebes, VI 361. Alfonso. See Alphonso

ALFORD, a town in Lincolnshiie, II, 480,

- (MICHAEL), Jesuit, II 480 - battle of, V. 406.

on the dates of St Paul's Epistles, XVII 350.

Alfragan, III. 794. See Alfragan.

Alfragan the Great, II 480, VIII. 657—

academy at Oxford founded by, II 61 -his translation of Bothius, IV his Doomsday Book, VIII. 98-Asser's life of, III 776-his encouragement of ine of, III '70-ms encouragement of science, XIV. 457—his navy, XVI 89—tall by jury instituted by, XIII 22—his ships, XX 119—not the founder of Oxford University, XXI 452.

(Prince), VIII 662.

Alfricon, a town in Derbyshire, II. 481. Alfric, VIII 661

ALGE, II. 481-natural order of plants, V. 217—their reproductive organs, 147used as food, 218-their zones, 229

-their classification uncertain, III. 194 -distribution of, XVII. 630.

ALGATOLA, a Corsican scaport, II, 481 ALGARDI (Alessandro), II 482; XIX. 864. ALGAROTH, II 482; VI. 494 ALGAROTTI (Francesco, Count), II. 482. ALGARVE, a Portuguese province, II 482
—chmate of, XVIII. 394.

ALGAZRI, II. 482, 565; XIV. 210

ALGAZI, II. 482. ALGEBRA, II 482-invention of, I 556

-first introduced into Europe by Leonardo of Pisa, ib -first pilnted book on, 1b -Arabic notation introduced by Gerbert, 1b-system of Diophantus, 557—resolution of equations higher than the second degree, and extension of the rule by Cardan, ib -merit of his discoveries, 558-poetical dress of his algebraic rules, ib.-properties of algebraic equations discovered very slowly, 1b .- causes of this, 559-contributions to the science by Recorde, Bombelli, Victa, Girard, Harriot, &c, 558, 559 (see these articles)—application of the algebraic analysis by Descartes to define the nature and investigate the properties of curve lines, 560-analysis of the work in which that discovery is announced, ib .-- advantages of introducing algebra into geometry, ib .- the notation reduced to a system of symbolic writing, 561-the benefits of expressing quantity, and the operations on quantity, by conventional symbols, ib —difference in practice be-tween the algebraic and the geometric method of treating quantity, ib .-- on the use of the signs plus and minus, 562, 709—algebraical signs, 709—Descartes' contributions to, 710; VI. 278—proposal of the conchoid by Newton, I. 711 advance made in, by the discoveries of Leibnitz, ib .- discoveries of De Moivre and Stirling, ib .- theory of quadratic factors, 712—further improvements in algebra, 712, 713—elementary works on, 713-valuable results of the introductaon of, 560—applied to the calculation of annuities, III, 242; II. 536. See Equations, Negative Sign, Series, &c. ALGEMESI, a town of Spain, IL. 564.

ALGENIB, star, IL 564. ALGER, a French priest, IL :64. Algeria, in Africa, IL 223; X. 263—de-

#### ALG-ALI

clared to belong to France, 216—their conquests in, 217, 221—Duke d'Aumale, governor of, 230 See Algiers ALGEZIRAS, a Spanish city, II. 564; X. 620.

- or Algeciras Bay, X. 620. ALGHALIB-BILLAH, II 565. ALGHAZZALI, II. 565. ALGHERI, a city in Saidinia, II 565.

ALGHISI (Francesco), musician, II 565.

(GALEAZZO), Italian architect, II.

- (Tomasso), Italian surgeon, II 565, ALGIABARII, a Mahometan sect, II 565 ALGIDUS, II 565.

ALGIERS, II. 565, 577; X. 263-Admiral Blake's negotiations with, IV. 752-Barbarossa proclaimed king of, 431-Lord Exmouth's attack on, V. 622-Bruce's residence at, 689—consul and vice-consuls at, VII. 336-taken by the French in 1830, X. 198-monarchy of, XV. 412-weights and measures of, XXI 809-war with United States, 44. ALGOA-BAY, II 577; X 711.

ALGOr. star, II 577; IV 84 Algonkin, the, group of Indian tribes, IX.

ALGOR, II. 577 ALGORITHM, II. 577. ALGUAZIL, II 577

Algyra, a genus of reptiles, XIX. 30. Alhama, Spanish city, II 577. Alhambra, II, 577; X, 794; III 449 ALHAURIN EL GRANDE, a Spanish town,

ALHAZEN, IL 579; III 795, X. 503-his explanation of objects appearing larger near the horizon, I. 621—his work on optics, and the value of his researches,

622, 623; XIII 449; XVL 523-solu tion of a very difficult problem by, I. ALHUCEMAS, II 579. See Alucemas.

ALI, cousin to Mahomet, II 579-reign of, III 363-tomb of, at Mesiid Ali, XIV. Ber, an eastern adventurer, IL

580: VIII. 488.

Bey, traveller under that name, II. 580; IV. 361,

Murad, XIII. 79. - Pacha, II. 580-history and character of, II 441.

- Pacha of Egypt, VIII 490. a town of Sicily, II. 580.

ALIAS, in law, II. 580. Alibaud, his attempt on the life of Lonis

Philippe, X. 212. ALIBI, in law, II. 581.

ALICANTE, a city of Spain, II, 581—battle near, V 612—insurrection at, in 1844, XX. 482.

ALICATA, a city of Sicily, II, 581; XX. 245. ALTOUDY, Island, II, 581: XIII 502.

ALTEN, II. 581, 587-Lord Grenville's alien bill, V. 546. - Priories, II. 582.

ALIENATION, in law, II 582—mental, XIV. 426. See Mental Diseases. Alima hyalina, VII. 542.

ALIMENT, in the law of Scotland, II. 582. Alimentaria Lex, II. 582. ALIMENTARII PUERI, II. 582.

ALIMENTARY DUCT OF CANAL, II. 582. - function, III 3 - its organs, 69.

Alimentativeness, XVII 562.
ALIMENTS, II. 582; XVII 656; XIX. 610, 611-their effects on health, XIV. 440of plants and animals, III, 178-distinguished from medicines and poisons, ib. See Dietetics, Food, Nutrition.

ALIMONY, II. 582. ALIPILARIUS, II 582.

ALIPTERIUM, IL 582. ALIQUANT PART, II 582.

ALIQUOT PART, II. 582, Alismacese, nat. order of plants, V. 214 ALESON (Rev. Archibald), II. 582; XXI. 411—his theory of heauty, IV. 540—on the pleasure arising from the study of antiquity, 545; from the contemplation

#### ALI-ALL

of natural scenery, ib .- on associations peculiar to individuals, 547-on the causes of our admiration of Greek architecture, 549.

Alison (Sir Archibald), II 583; XXI 413. - (Professor), II 583-on single vision, XIII 462

Alisontia, river, II. 583. ALIWAL, village in N. India, II. 583-Sikhs defeated at, XI. 509. Alizarin, VIII 282.

ALJAMEIA, II 583 Alkadarii, II. 583. Alkahest, II. 583

ALKALI, II. 583; XV. 65-in soils, V. 98 —metals of the alkalies, VI 484—m the composition of the earth's crust, XVII. 619-Sir H. Davy's decomposition of, by means of galvanism, VII. 669, I 968—alkaline poisons, XIV. 434; XVIII. 129.

Alkalimeter, II. 583. ALKALOID, II. 583-alkaloids as alteratives, XIX, 611

ALKANET, plant, II 584; V. 201, III. 122. Alkindi, II. 584 See Alcmaer.

ALEMAAR, II 584 Alkoran, II. 584 See Alcoran ALLA, or Allah, II. 584. Allagna, town of Piedmont, II. 584

ALLAHABAD, in Hindustan, II. 584: XVI 301 . XI 479.

Allamand (M), his criticism on Locke's argument against innate ideas, L 107extract of a letter from, to Gibbon, 250 -Gibbon's account of, 107, n. 1. Allan (David), II 585.

· (Thomas), stereotyping improved by, XVIII 550.

(SIR WILLIAM), II. 585; XXI. 866. Bridge of, II. 586; XX. 704.

Allanite, mineral, XV 90. ALLANTOIS, II. 586; XVII. 686. ALLATIUS (Leo), II. 586 ALLECTUS, II 586; V. 380

Allecula, genus of insects, IX. 132. ALLEGANY, several counties in U.S. so named, II. 586

- Indians, II. 680. mountains, II 586; XVI. 213; XVII 594, 894, XXI. 420, 748—their geology, II. 587, 675.

- river, II. 587; XVII. 395. ALLEGATA, II. 587.

Allegewis, II 683. ALLEGIANCE, II. 587. - oath of, II 588

church, I 537—generally due to the church in which a man has been brought up, 543

ALLEGORY, II. 588, XIX. 132—propensity of the orientals for, XV. 759—in Spenser, XVIII. 121-Frenchallegoricalromance,

ALLEGRI (Antonio), or Correggio, painter II. 588—his style, III. 709; XVII. 72. —— (GREGORIO), II. 589.

ALLEGRO, IL 589. Allein (Joseph and Richard), II 589. ALLELUIAH, II. 589.

ALLEMOND, French town, II 590. Allen, bog of, XIII. 81, 91; XXI. 286

—— (Dr John), II. 590—his charge against Dr Lingard, XIII. 496. - (Dr John), his plan for propelling

vessels by ejecting water from the stern, XX. 636. (JOHN), archbishop, II. 590. (Rev. J. N.), on the climate of

Dadur, VII. 616.

- Lough, XIII. 327. (THOMAS), IL. 590.

(WILLIAM), IL 590. (Captain W.), on the Dead Sea, XVII 188.

ALLENDORF, II. 590. ALLER, river, IL. 590.

a Saxon form of the superlative,

ALLERION, in heraldry, II. 590. ALLESTREE or Allestry (Richard, D.D.),

#### ALL—ALM

ALLESTRY (Jacob), IL 591. ALLEY (William), II 591. ALLEYN (Edward), English actor, II. 591 -Dulwich College founded by, VIII. 235; XXI 167.

ALL-HALLOW, or All-Saints, II. 584. ALLIA, river, IL 592

Alliaceous plants, XI. 741-used as food, IX. 760

ALLIANCE, II. 592—of France and England against Russia, VIII. 40

Holy See Holy Alhance.
ALLIER, in France, II 592.

- (Louis), II 592 Alhes of Rome, XIX. 307.

ALLIGATI, II 592. ALLIGATION, II. 592

ALLIGATOR, II 593, XVII. 634; XIX. 25 -teeth of, XVI. 437.

- machine used in the manufacture of iron, XIL 559. ALLIOTH, star, II. 593

Alliteration, II 598—in the Kaffir language, XIII 226. ALLIUM, a genus of plants, II. 594; XI.

ALLIX (Pierre), II. 594

Allman (Prof), on the genus Polyzoon, XXL 1002 ALLOA, in Clackmannanshire, II. 594-

ferry at, VI. 749-collieries at, 750port of, 751-trade and commerce, 1b ALLOCATION, II. 594. Allochroite, mineral, XV. 85.

ALLOCUTIO, II 594 ALLODIUM, IL 594.

Allocopathy, or Allopathy, XI. 606 Allogonite, mineral, XV 94. Allomorphite, mineral, XV. 95. Allonville, great oak of, XXL 270. Allophane, mineral, XV 83.

ALLORI (Alessandro), IL 594 - (Cristofano), II. 594.

Allotropism, VI. 447. ALLOXAN, II 595 ALLOY, IÍ 595, VI 484. ALL-SAINTS, island, II 584. ALL-SAINT'S BAY, II 584 ALL-Souls, in the calendar, II 584.

All-Souls College, Oxford, XXI. 459. Allspice, XVII 710. ALISTADT, in Saxe-Weimar, II. 595.

ALISTON (Washington), painter, II. 595. Alluaudite, mineral, XV. 101. ALLUMEE, a heraldic term, II. 595. ALLIMINOR, II. 595.

ALLUSION, IL. 595. Alluvial formation, XVII. 587.

ALLUVION, in law, II 595. ALLUVIUM, II. 595, VII. 722. ALLYGHUR, II 595-sepoy mutiny at, XVI. 309.

Almacantars, II 595. See Almucantars. Alma, river in the Crimea-battle of the VII. 503; XIX 503; XXI. 375.

Almada, a Portuguese town, II. 595

beds, geological formation, XIII.

Almaden, town in Spain, II 595silver mines of, XV 237; XX. 489. Almadie, II 595. Almagest, II 595; III. 793, 794.

Almagre, II. 596. Almagrera silver mines, XV. 234.

Almagro, a Spanish city, II. 596.

(Diego de), II 596; XVII. 463. the younger, II. 597

ALMANUN, II 597—his patronage of htera-ture and science, 755; XIV. 456, of astronomy, III. 794; of medicine, XX 814—his attempts to ascertain the dimensions of the earth, IX. 548; X. 468.

ALMANACK, II. 598—old almanacks, III. 582—poor Richard's, X. 290. (NAUTICAL), II. 598; I. 884; III. 581, 582 814, 815; XIV. 335, 336; XXI. 965—improved by Baily, IV. 375; and Airy, XIII. 687-its use in finding the longi-

tude, ib. et seg-American, III. 815. among antiquaries, II. 598. Almandine, XV, 84—ruby, 87. Almansa, Spanish city, II. 599.

#### ALM—ALP

Almansur, caliph, II 599-his patronage of astronomy, III. 794; and medicine,

Almanzor, Moorish general in Spain, XX. 462

Almaraz, Spanish town, II 599. Almaric, II. 599. Almas cavern, in Transylvania, XII. 10. ALMAZARRON, II. 599 See Mazarron.

ALMAZORA, Spanish town, II. 599. ALME, or Alma, Egyptian dancing-guls, II 600; VIII 443, 448

ALMEHRAB, II. 600 Almeida, Portuguese fortress, II. 600; V. 608.

ALMEISAR, ancient Arabian game, II. 600. Almelo, in the Netherlands, II. 600 Almenar (George), physician, XIV 457. ALMERIA, city and province of Spain, IL

ALMEYDA (Don Francisco), II. 600. ALMIGGIM, II. 601. See Almuggim. Almissa, town in Dalmatia, II 601. Almonedes, II. 601, 602; XX. 461. ALMOND tiee, II 601; V. 191-culture of,

XI. 711—prussic acid in the kernels of the fruit, XIV. 437.

oil, XVI 495, 497-Indian, 496. furnace, II. 601

river in Edinburghshire, VIII 408: XIII. 497. - viaduct on the Edinburgh and

Glasgow railway, XVIII. 763. ALMONDBURY, township in Yorkshire, II

ALMONDS, in anatomy, II. 601. ALMONER, II 601.

- LORD HIGH, IL 601. ALMORAH, II. 602.

Almoravides, II. 602, 620; XX. 461. Almquist (J. C. L.), Swedish author. XIX. 710.

ALMS, II 603-alms' chest, ib. - houses in England, VIII. 748. giving, objections to, XVIII. 296 ALMUCANTARS, in astronomy, II. 603; IV. 2; VI 732—staff, II. 603.

ALMUCIUM, II 603 ALMUCIUM, Portuguese liquid measure, IL 603.

ALMUGGIM tree, II. 603 ALMUNECAR, Spanish city, II. 603. ALNAGE, II 603.

Alnager, II. 603. ALNUS, genus of plants, II. 603; V. 208.
ALNUVICK, II 603 — castle, XVI. 300—
diminished mortality in, owing to sanitary measures, XIX. 604.

ALOA, II. 604 ALOE or Aloes, genus of plants, II. 604; V. 212—American aloe, ib.—poisonous to some animals, III. 179—aloe fibre, XXI. 783.

ALOGI, ancient heretics, IL 604 ALOGOTROPHIA, IL 604. Alompra, V. 782. Alomya, genus of insects, IX. 189. Alontium or Aluntium, II. 641. Alonzo. See Alphonso.

ALOPECIA, II. 604. Alopecias, genus of fishes, XII. 324, 322. Alopeciadæ, family of fishes, XII. 324. Alopeourus, a genus of grasses, II. 604. Alora, Spanish town, II 604. Alosa, genus of fossil fishes, II. 604; XII 347.

Alost, a Belgian town, II. 604. Alouattes, or howling monkeys, XIV. 142. ALPACA, a species of llama, IL 605; XIV. 205—in Bolivia, IV. 821, 828—in Ecu-ador, VIII. 887—Peru, XVII. 478 wool of, XXL 906.

Alpargates, II. 605. ALF ARSLAN, Sultan, II. 604; XVII. 437

— his war with Romanus IV., XIX.

355. ALPHA, II. 605

ALPHABET, II. 605-Coptic, XL 412-Egyptian, 417 - stenographic alphabets, XX. 675—alphabet of nature, 676—for the blind, IV. 776 — finger, 778 — in electric telegraphs, XXI 102, 115 st 86q.

В

#### ALP-ALT

ALPHEUS, father of James the Less, II 617. ALPHERY (Mikipher), II 617. ALPHEUS, II 617; XL 11. ALPHONSE, islands, II 617 ALPHONSIN, in surgery, IL 617 Alphonsine Tables, II 620 Alphonso, the name of 22 Spanish and Portuguese sovereigns, II 618. L king of Aragon, XX. 463
 X king of Castile, II 619nomy cultivated by, III 796. ALPHONSUS, Spanish historian, II. 622. Alpi Apuane, in Tuscany, XXI. 392 Alpine plants in Scotland, XIX. 796 ALPINI (Prospero), II. 622—on the balsam of Mecca, IV. 401, 402—on the plague, XVII. 749

ALPISTE, OF Alpia, II. 623. ALPS, II. 623, IX. 381; XVII. 596; XX. 887; XXI. 495—botany of the, V 226 glaciers of, X 634 et seq —eocene rocks of, XV. 214-Hannibal's passage of, IL. 623; VI. 293, XI. 209—Buonaparte's passages, X. 105, 118-geology of, 583; XVII. 596—scenery of, compared with that of the Himalayas, XL 438—snowlevel, XVII. 602—chamois and ibex, peculiar to, 680, 632—heights of the principal peaks, 642—rivers proceeding from, XIX. 181 — Simplon pass and road, XX. 298—of the Valais, XXI. 504. (HIGHER and Lower) departments

of France, II 628. Alpteghin, II 628 ALPUJARRAS, in Spain, II. 628 ALQUIERE, Portuguese measure, II 628. ALREDUS, English historian, II. 628 ALRESFORD, town in Hants, IL 628. ALSACE, in France, II. 628, X. 277— Charles X.'s journey to, 195—wines of, XXI, 883.

Alsen, Danish island, II. 629. AlsFeld, in Hesse Darmstadt, II. 629. Alsh (Loch), XIX. 795. Alshash, city and province in Bokhara,

IL 629. Alsheda, in Sweden, II. 629.

ALSIRAT. II. 629. Alsum, an ancient city of Etruria, IL

Alsor (Anthony), IL 629. ----- (VINCENT), IL 629. ALSTAHAUG, IL 629 ALSTED (J. Heinrich), IL 629. Alster, river, XII. 198
ALSTON (Charles), II 629.
Alston's alphabetical system for the blind, IV. 781; XVIII. 554.

Alstonite, mineral, XV. 95. ALSTON-MOOR, II. 630. See Aldston-moor ALT, in music, II 630. or Alut, branch of the Danube, II

630; XXI. 10. ALTAI mountains, II. 630; III. 734; XVII. 599; XIX. 548.

Altaic race of man, IL 775. See Mongolian,

Altaite, mineral, XV, 118. ALTAMURA, a Neapolitan city, II. 630. ALTAR, IL 630; III. 433-use of, in Christian churches, derived from Judaism and Paganism, I. 510.

ALTAR-THANE, IL 682, Alt-azimuth mounting of telescopes, XXL 143.

ALTDAMM, city in Pomerania, IL 632. ALTDORF, town in Bavaria, IL 632-Baden, ib.—in Switzerland, 1b., XX. 882. ALTDORFER (Albert), IL 632. ALTEA, town in Spain, IL 632. ALTELAND, in Hanover, IL 632.

ALTENA, II. 632. See Altona. - a circle and town in Westphalia IL 632.

- river in Finmark, XIII. 234. ALTENBERG, IL 632-tin mine of, XV. 240.

ALTENBRUCH, II. 632. ALTENBURG, IL 632; XIX. 680. ALTENEIRCHEN, II. 632. ALERBANTS, in medicine, II. 638-in dyeing, VIII. 278.

ALT—AMA ALTERN-BASE, II. 633 ALTERNATE, in heraldry, II. 633. husbandry, II 263
ALTERNATION, IL 633—of beds, in geology, XV 161 ALTERNATIVE, II. 633. ALTHEA, a genus of plants, II. 633; V Althorp, (Lord) See Spencer, Earl. Althca, genus of insects, IX. 150 ALTIN, II 633—lake in Siberia, ib ALTING (Heinrich), II 633. — (JACOB), II. 633. (MENSO), IL 634 Altingiaceæ, nat. order of plants, V. 207. ALTINUM, II. 634. ALTITUDE, II. 634 - instrument, ib - of geometrical figures, X. 520. ALTRIRCH, in France, II 634 Altmann (L.), his works on insects, IX ALTMUHL, river, II 634 ALTO-BASSO, II. 684 - faggotto, ib. - ripieno, ib See Music.

Douro, wines of, XXI. 884. Alto-Rehevo, II 634; IV. 492; XIX. 5 ALTOMONTE, Italian town, II. 634 ALTON, town in Hants, II 634-village in Staffordshire, ib ALTONA, II. 634—climate of, VII. 746 ALTORF, II. 634. See Altdorf. ALTRANSTADT, town in Saxony, IL 634. ALTRINGHAM, in Chester, II 635-carrot, XL 740 ALTSOL, II. 635. ALTSTRELITZ, German town, II. 635. ALUCEMAS, Island, II 635. Alucita, genus of insects, IX, 218. ALUDELS, II 635. ALUDELS, II 635, XV 97—sometimes used by bakers, IV. 381—prevents dry rot VIII. 212—in dyeing, 273, 277, 279, 293—used in adulterating bread, IX. 770—specific gravity of, XII. 88—optical properties of, XVI. 690.

——slate, II. 638. stone, II 637; XV. 96. Alum Bay, eocene beds of, XV. 212excellence of its sand for windowglass, X. 662. Aluminite, II. 639; XV. 96. Aluminum, VI. 487. Alum-root, plant, V. 194. Alumite, mineral, XV. 96. ALUNNO (Nicolo) IL 641 Alunogene, mineral, XV. 97 ALUNTIUM, or Alontium, IL 641.

Alumina, VI. 488; XV 65-in rocks and soils, II 389 et seq.—a mordant in dyeing, VIII. 279, 315—sulphate of, II.

Alurnus, genus of insects, IX. 148. Aluterius, genus of fishes, XII. 313. ALVA DE TORMES, II. 641, 440.

ALVA or ALBA (F. A de Toledo, Duke of), II 641—his proceedings in the Netherlands, XI. 513 et seq-his cruelties in Brussels, V. 699.

ALVARADO (Pedro de), II. 648; XI. 77.

Mexican town, XIV. 725.

ALVARES DE LUNA, II. 648. ALVAREZ (Francisco), II. 643. - (Don Jose and Manuel), IL 643.

(Juan), president of the Mexican republic, XIV. 714. ALVEOLUS, II 643. ALVERCA, town in Portugal, II. 643. ALVINZ, in Transylvania, II. 643 Alvinzi (General), XV. 788 et seq. Alwaidh, a Mahometan sect, II. 644.

ALWUR, in Central India, II. 644. ALYATTES, king of Lydia, II. 644; XIII. 747—barrow of, IV. 473 ALYEUS, II. 644; XII 776. Alyson, genus of insects, IX. 196.

ALYTABOHA, II. 644. ALYTH, a burgh in Perthshire, IL 644. ALYZIA, an ancient city of Acarnania, II. 644.

ALZURA, II. 644. See Alcira. AMA, II. 644. AMABYR, II. 644. AMAC, Persian poet, II. 644.

**A**MA—AMB Amada, temple of, III. 434, 436, 441. Amadan. See Hamadan.

Amadeus, V, VIII, and IX, counts of
Savoy, II 644, 645, XXL 509 - II., king of Sicily, XIX. 641 AMADIA, town in Kurdistan, II. 645 AMADIS DE GAULA, II. 645. AMADOU, II 645. Amænuphthes, Egyptian king, XL 389. AMAIN, a sea-term, II. 645. AMAK, Island, II 645 AMAL, Swedish town, II. 645 AMALAGAN, II 646. AMALARIC, II 646. AMALASONTHA, II 646 Amalden, quicksilver mines at, XV 237. AMALERITES, II 646. AMALFI, Italian city, II. 647, XX. 240alleged discovery of the Pandects at, VI 747—10yal palace of, XV 782 AMALGAM, II. 647; VI 498—for electrical machines, VIII 536. mineral, XV. 114. AMALGAMATION, II. 647 — extraction of silver by, V. 46.
AMALIA, II. 648. AMALTEO, name of three Itahan poets, II 648. —— (Pomponio), painter, II. 648. Amalthea, II. 648 Amalthei, ammonites, XVII 113. AMAMA (Sixtinus), IL 648. AMAMD (M A. G. Sieur de St), II. 648. - (SAINT), towns in France, II. 648. AMANTEA, Neapolitan seaport, IL 648. AMANUS, mountain of Syria, IL 648 Amaponda, Kafrarian tribe, XIII. 32, 37. AMARANTACEÆ, or Amaranthaceæ, order of plants, II. 649; V. 203 AMARANTE, a Swedish order of knight-hood II. 648. AMARAPURA, II. 649. See Ummerapoora. AMARA SINHA, IL 648. Amarygmus, genus of insects, IX. 132.

AMARYLLIDEÆ, or Amarylhdaccæ, order of plants, II. 649; V 212. AMARYNTHIA, feshval, II. 649. Amarynthos, amphictyony of, IL 729 AMASA, II. 649

Amasia, II 649 . Amasis, king of Egypt, II. 649; VIII 465; XI. 389. Amatembu, Kafrarian tribe, XIII. 32, 37 Amathusia, genus of insects, IX. 208.

AMATI (Pasquale), II 649 Amativeness, faculty of, XVII. 562, 673. Amatus Lusitanus, II. 649. Amaurosis, II. 649 — in the domestic animals, XXI 578

Amaury, his invasion of Egypt, VIII. 480.

AMAXICHI, II. 649; XII. 452; XIII. 348. Amaxosa, Kaframan tribe, XIII. 33, 37. AMAZIAH, king of Judah, II. 649. Amazighis, African race, XV 594, 595.

Amazon, nver, II. 650, 675; V. 292; III.

675, XVII. 603, 646; XIX. 182—
—basm of the, II. 668; its flora, V. 293; XVII. 629 - physical characters

of, XVI. 87-Acuna's exploratory voyage on the, II. 120—navigation of the, 675—sea freshened by the water of, XVII. 573-its connection with the Ormoco, XVI 716-bores in, XVII. 581—country inundated by, 601—silvas of, 604, 609. - stone, mineral, XV. 70

Amazonas, in Peru, XVII. 474. AMAZONS, female warriors, IL 650. AMBACHT, II. 652. Ambarvalia, II. 652. AMBASSADOR, II. 652. Ambassis, genus of fishes, XIL 275. Ambato, town in Equador, XL 197. AMBE, in surgery, IL 655.

AMBER, II. 655, XV. 124-VIII. 523—mines of, in Burmah, V. 779—of the Æsti, X. 572—specific gravity of, XII. 88—fossil insects in, XVII. 103—in Prussia, XVIII. 669, 712—statue of, XIX. 844—in Yunnen, XXI. 960 —its use in making varnish, 526. - TREE, IL 656.

AMB—AME

Amberg, II. 656. Amberger (Christopher), painter, II. AMBERGRIS, II. 656; XIV 233. AMBERT, a French town, II 658. AMBIANI, now Amiens, IL 658 AMBIDEXTER, II 658. AMBIENT, II. 658 AMBIGENÆ OVES, II 658 AMBIGENAL HYPERBOLA, II. 658. Ambiguity, fallacies of, IX. 478 AMBIGUOUS, II 658. Ambiotoca, genus of fishes, XII 268 Ambiotocidæ, family of fishes, XIL 268. Ambir, II 658 AMBITION, II 658. AMBITUS, II. 658. Amble, pace of a horse, XI 656 AMBLESIDE, in Westmoreland, II 658 AMBLETEUSE, in France, II. 658. Amblogaster, genus of fishes, XII 237 Amblygon, in geometry, II 659. Amblygonite, mineral, II. 659; XV. 74. Amblyopsis, genus of fishes, XII 226 Amblyopus, genus of fishes, XII. 306 AMBLYOPY, II. 659 Amblypterus, genus of fossil fishes, XII 334; XVII 125

Amblyrhynchus, teeth of, XVI. 434. Amblysemius, genus of fossil fishes, XII. Amblyteres, genus of insects, IX. 123. Amblyurus, genus of fossil fishes, XIL

AMBO, or Ambon, IL 659 Amboise, French town, II 659.

(Francois and George D'), II

Amboncychia, fossil mollusks, XVII. 106. AMBOYNA, island, II. 659; XV. 404— lizard, XIX. 32—serpents of, 54.

AMBRACIA, in Epirus, II 661. AMBRESBURY, IL 662. See Amesbury. Ambrogi (Domenico), painter, II. 662. Ambrones, II. 662.

Ambrose, of Alexandria, II. 662.

(St), bishop of Milan, II. 662; VII 311—said to have introduced antiphonal singing, III 277.

- (ISAAC), II 664. - (Saint), island, II 664. AMBROSIA, II 664.

Ambrosian office, or rite, II. 664; XIII. 516. - libiary, at Milan, XIII 413.

hturgy, XIII. 516. Ambrosin, coin, II 664. Ambrosius Aurelianus, II. 664—Stone-henge said to have been erected by, XX. 709. AMBRY, IL 665.

Ambubalæ, II. 665. Ambulance, II. 665. AMBULANT, II. 665. AMBULATORY, II. 665. Amburbrum, II. 665. Ambustus (Q. Fabius), XIX. 803.

AMEDABAD, city of Hindustan, II. 665. AMEDIANS, an order of monks, IL 665. AMEDNUGGUR, in Hindustan, II. 665; VII.

Ameilhon, on the classification of books, IV. 715, 716.

Ameivas, reptiles, XIX. 28. AMELAND, island, II. 665. AMELIA, II. 666.

- ISLE, IL 666. AMELOT de la Houssaye (A. Nicolas), II. 666.

AMELOTTE (Denis), II. 666. - (F.), his French New Testament, IV. 701. AMEN, II. 66.

Egyptian deity, VIII. 486.

AMEND, or Amende, II. 666—amende honorable, ib

AMENDMENT, II. 666. See Parliament. Amenemha I. II. III. IV., Egyptian kings,

VIII. 455, 456. Amen-numt, Egyptian queen, VIII. 460. Amenoph I. II. III., Egyptian kings, VIII.

Amenophis, his encouragement of the mili-

#### AME—AME

tary spirit among the Egyptians, III Amenophium, temple of, in Egypt, VIII.

Amenses, XI 388 Amentia, XIV. 426.

510.

Amentiferous trees or shrubs, V. 115, 207,

AMENTUM, or Ament, II. 666; V. 115

AMERCEMENT, IN law, II 666. Amerhinus, genus of insects, IX. 140 AMERIA, II. 666

AMERICA, II. 667-physical astronomy in, -armies of, III 661-Cabot's dis-I. 827 1. 527—37mles 61, 11 507—625 cm coveries in, VI 47—botany, V. 225, 227, 228; XVII 627, 628, 629—discovery of, by Columbus, VII. 115, 188; X. 471, and n-effects on commerce of the influx of gold and silver from, VIL 189corn trade of, 404-cotton-wool, 447corn trade of, 404—cotton-wool, 447—trade with England, VIII. 741, 733—emigration to, 650, 651—insects of, IX. 69—ethnology, 347—fairs in, 469—glass-making, X. 660—antiquities of Central, XI 77—rife of, 101—first to establish commerce with Japan, XII 698—variation of the needle in, XIV. 51, 53-languages of, XIII. 199, 203, XVII 536—religious missions to foreign countries, XV 270, sum of money expended on, 272-education in, 820newspaper press, XVI 192, 193, 194, 195—comage, 390—terthary strata, XVII 588—mean elevation of the surface, 590-mountains of, 592; height of, 644, 645-mammals of, 631, 632birds, 633, 634; XVI. 732—serpents, 634—distinction between fossil fauna of, and that of the old world, 638clocks, VII. 18—Academy of Sciences, II. 66—Oriental Society of, III. 759— Bible Society, IV: 704—surply of the precious metals from, XVIII. 460—produce of the American mines, 460, 461, 462-leptiles of, XIX. 25, 28 et seq, 54 (North), aurora borealis in, IV. 244—Humboldt's vertical section of, 469 war between the British and French in, V 463-remarkable wooden bridge in, VI 384—temperature, 770, 773—its colonization by the British, VII 136 colonization by the British, VII. 138—British colonies in, 147—exports from Britain to, 180—fire trade, X. 345, 347—gladiers, 635—languages, XIII. 219—hospitals for the insane, XIV. 528—mines of, XV. 322, 234—metallic produce, 248—lower Silurian rocks, 197 upper Silurian, 199-Devonian, 200carboniferous, 204—eocene, 214—miocene, 1b—extent of its coasi-line, XVII mountains, 593, 594; height of, 645 —rivers, 604—earthquakes in the south-east districts, 616—iron ores of, XII. 541-discoveries in the Arctic regions of, XVIII. 170-post-office, 406, 408presbyterianism in, 491-Associate Synod of, 492-Quakers in, 720, schisms among, 721-prison discipline in, 571as a receptacle for British convicts, 576 -Russian possessions in, XIX. 552course of the rivers of, 181-surgery in, XX. 819—timber of, XXI. 276—Tocqueville on, XXI. 299—slavery in, XXI. 321 -suicide, 799—states of, 419—debt of the different states of, 428—cultivation of the vine, and winemaking in, 888volcanoes of, 608—emigration to, 677—map of, II. Pl. XXII. See United States, New York, and the other North American States, Canada, &c.; Washington, Jefferson, &c.

(South), French scientific expedi-tion to, V. 248; IX. 549—recognition tion to, V. 243; IX. 549—recognition by Britain of the independence of the republics of, V. 689—trade with Eng-land, VIII. 738—ethnology, IX. 348, 349—languages, XIII. 228—mines, XV. 235—metaille produce, 248, 249—birds, XVI. 782—pearl fisheries, XVII. 357 extent of its coast-line, 585-tendency to elevation in the whole continent, 590 — volcanoes of, 590, 593; XXI 603, 605—height of mountains, XVII. 645

#### AME-AMM

-rivers of, 603 - Humboldt's travels in, I 992; his view of the distribution of plants in tropical America, XVII. Pl IV -slavery in, XX. 321-wines of, XXI 882-map of, II Pl XXIII. See the different countries of; Andes, Amazon, &c.

AMERICA, UNITED STATES OF, IL 714. See United States

American Indians, IL 676, 680; VI 146; IX. 347, 348, 349 - traditions of the Deluge among, VII 719. See Cherokees, Esquimaux, &c.

American war, V. 469, 477, 480 et seq-Burke's opposition to, 776-compensa tion to the royalists, 527. See United States, Washington

AMERIGO VESPUCCI, II 714 pucci.

AMERSFOORT, a Dutch town, II. 714 AMERSHAM, in Bucks, II 714 AMES (Fisher), II 715, XXI 424—celebrated speech of, XXI 758.

- (JOSEPH), II. 715—his typographical antiquities, IV 707

— (WILLIAM), D D D, II 715 AMESBURY, IN Wilts, II 715 AMETHYST, II 715; XV 69—structure of, XVI 541—in heraldry, II 715—circular polarization in, XVI 676, 677—dichroism, 666

AMETHYSTINE, II. 715. AMHARA, II 715, 56 Amharic or Abyssinian alphabet, II 615language, II 57, XIII. 225.

in Hants, Massachusetts, US., II 716.

AMHERSTBURG, II. 716 AMHURST (Nicholas) II 716. Amia, genus of fishes, XII 316, 317 

Amici (Prof ), his micrometer, XIV 749on compound object-glasses, 777, 778, 782—his microscopes, 780, 783, 785 —— (Vicenzo), on the microscope, XIV

785 AMICTUS, II 716. AMICUS CURLE, II 716. AMIDA, Japanese god, II. 716. Amide, VI. 466

AMTENS, II. 716; XX. 412 - population. X. 277—peace of, V 585, 587; X. 121, 126; XV. 794—manufacture of cotton and cotton-velvet at, X. 252.

Amudæ, family of fishes, XII. 317. AMILCAR, II 717. See Hamilcar. AMILICTI, II. 717

Amin (Muhammad), XVII. 20.

AMINTA, II. 717.

AMIOT (Père), Jesuit, II. 717—on the Chinese, VI. 567—on ancient Chinese characters, 572, 577.

AMISUS, in Pontus, IL 717. AMITERNUM, IL 717. AMITTERE LEGEM TERRA, IL 717. AMINOH, seaport in Anglesey, II. 717.

AMMA, II 717. AMMAN (J. Conrad), II. 717. ———— (PAUL), II 717.

or Ammant, IL 718. Ammanati (Battolomeo), II 718. Ammianus Marcellinus, II. 718. Ammirato (Scipio), II. 718. Ammobates, genus of insects, IX. 200.

Ammocates, genus of insects, IX. 200.
Ammocates, genus of fishes, XII. 228.
Ammocatide, family of fishes, XII 225.
AMMODYTES, genus of fishes, II 718.
AMMON, or Ammonium, II. 718; XVI 397. the Egyptian Jupiter, II 719, 724;

XI. 382. (ANDREAS), Latin poet, II. 719. (ANDREAS), LEARN POET, IL 715.

(Dr), on the Pentateuch, XVII.
402—on theology, XXI. 194 et seq.
AMMONIA, II 713; VI. 507; XV. 65—its
composition, IL 720; VI. 465—salts of,
500—a constituent of the atmosphere.

IL 876; VI. 463, 465—specific gravity

#### AMM-AMP

of, XII 89-absorbed by the roots of plants, II 379; V 95—poisonous properties of, XIV 484, 435—decomposition of, II 384-Davy's experiments on, VII. 670—from peat, XVII 359 Ammonia, sulphate and muriate of, II. 412.

- a name of Juno, IL 719. Ammonia-alum, XV 97 AMMONIAC, II 719-sal-ammoniac, ib : X.

433-origin of the name, II 718-gumammoniac, V. 195.

Ammonacal liquor, as manure, II. 413
—from gas-works, X. 433.

Ammonites, fossil shells, II 723, VII
406, XV 397, XVII 111, 113

- people of Palestine, II 723. Ammonitidæ, fossil mollusks, XVII 112 Ammonitis, a country of Arabia Petræa,

Ammonium, VI. 465, II. 720.
Ammonius Saccas, of Alexandria, II. 723 ancient lithotomist, XX. 811 Ammophilus, genus of insects, IX 195. Ammothea, genus of Arachmides, III. 387. AMMUNITION, II. 724. AMNESTY, II 724

AMNIOS, II 724; XVII 686; III. 72. America, i. 122; Avil 636; III. 72, America, genus of zoophytes, XXI 1007. Amorica, a kind of poem, II. 724 Amolite, mineral, XV 116 Amok, "running amok," XIV. 105. Amot, a city of Persia, II. 724 Amonum, genus of plants, II. 724, VI. 232; V. 211

Amon, an Egyptian god, II. 724.

a king of Judah, II. 724 AMONEBURG, in Hesse-Cassel, II 724. Amontillado sherry, XXI. 884, 890 Amontons (Guillaume), II 724—his barometer, IV 455, 457-his pneumatic experiments, XVIII. 53.

Amoo, river See Oxus. Amoor, river, XIX. 548—Russian possessions on the banks of, ib. n AMORBACH, city in Bavaria, II 725 Amoreux (N), his work on the venomous insects of France, IX. 8

Amongo, island, II. 725. AMORITES, II. 725 Amoros (Col.), on gymnastics, XI. 169. Amorphous, II 725. Amorphozoa, XVII. 92; XXI. 1008. Amortization, in law, II 725. Amos, the prophet, II 725.

Amosis, Egyptian king, VIII. 460. Amour (Guillaume de St), II. 725.

- river, II. 725. See Amur AMOY, II. 726—opened to British com-merce in 1842, VI. 597—exports and imports, 591

Ampolideze, nat order of plants, V. 187. Ampelis, genus of birds, XVI 750.

Ampere (Andre Marie), II. 726; I 974 his experiment of projecting water through a vertical slit, I 727-his electro - dynamic theory, 974; considera-tion of that theory, 975 — his great merit, ib. — Sir Humphry Davy's conduct towards, VII. 671—his discoveries in electro-magnetism, VIII. 532—on optics, XVI 546—his suggestion for an electric telegraph, XXI. 94 - on electro - magnetism, 638 — his rotatory magnet, ib., 639 — his electro-dynamic cylinders, ib.—his revolving battery, 640—his electripeter, 643.

Amphacanthus, genus of fishes, XIL 304. AMPHIARAUS, Prophet of Argos, II. 726— oracle of, XVI. 698—temple of, IV. 192. AMPHIBA, II 726, XIV. 171; XIX. 14— fossil, XVII. 132—their blood-globules,

II. 779—teeth, III. 105. AMPHIBOLE, mineral, II 727. Amphibolite, II. 727; XV. 135. AMPHIBOLOGY, II. 727. AMPHIBRACHYS, IL 727; IX. 770.

Amphibrya, class of plants, V. 179. Amphicoma, genus of insects, IX. 126. Amphicola, fossil reptiles, XVII. 152.
Amphicola, fossil reptiles, XVII. 152.
Amphicoms, II. 727.
Amphicoms, II. 727; IX. 497.

Amphicyon, genus of fossil mammals, XVII 165—dentition of, XVI 464.

#### $\mathtt{AMP}\mathbf{--AMU}$

Amphidesma, genus of mollusks, XV. 342 Amphidotus, fossil echinoidea, XVII. 100. AMPHIDRYON, II 729.

AMPHILA, II 729. Amphilestes, genus of fossil mammals, XVIL 157.

AMPHILOCHIA, II 729. AMPHILOCHIUS, DISHOP, II. 729. AMPHILOCHUS, diviner, II 729. AMPHIMACER, II 729, IX. 770 Amphinesians, in ethnology, IX. 347. Amphinome, genus of annelides, XI. 297. AMPRION, in mythology, IL 729. AMPHIORCIA, IL 729. Amphioxidæ, family of fishes, XII 227.

Amphioxus, genus of fishes, XII. 227.
Amphioxus, genus of fishes, XII. 227.
Amphipoda, family of Crustacea, VII. 542
AMPHIPOLIS, II. 729; XIII. 763; XXI. Amphipnous, genus of fishes, XII. 231.

Amphiprion, genus of fishes, XII. 265.
AMPHIPROSTYLE, II 729: III. 507.

Amphiroa, genus of zoophytes, XXI. 1006. Amphisbæna, reptiles, XIX. 40-teeth of, XVI 428

Amphisbænidæ, family of reptiles, XIX.

Амрнівсії, П. 729; Х. 485. Amphisile, genus of fishes, XII 305—of fossil fishes, XII 344.

AMPHISSA, IL 729—sacred war against, ib Amphistium, genus of fossil fishes, XIL 345

Amphistoma, genus of zoophytes, XXI, AMPHITHEATRE, II 729, III 469-Roman,

at Nismes, XVI 279 Amphitherium, XVIL 157-jaw and teeth

of, XVI 448 AMPHITRITE, II. 731—genus of annelides,

AMPHITRYON, IL 731 AMPHIUMA, genus of reptiles, II 782; XIX.

Amphodelite, mineral, XV. 71 Amphora, II 732; XVIII. 713. Amphorarium vinum, II 732. AMPHOTIDES, II 732.

Amphroderidæ, family of fishes, XIL Amphroderus, genus of fishes, XIL 236.

Amplexus, fossil corals, XVII. 97. AMPLIATION, II 732

AMPLITUDE, in astronomy, IL 732; IV. 1—magnetical, II 732 Ampsincer valls, II. 732
Ampthill, II. 732—park, IV. 569.
Ampulex, genus of insects, IX. 195
Ampulex, II. 732—knights of St, ib;
XIII 120

AMPULLARIA, a genus of shells, IL 732;

XV. 365, 366. Ampurias, in Catalonia, II. 732. Amputation, XX. 825—now less frequently resorted to than formerly, 823.

AMPYX, II. 732 AMRAPHEL, king of Shinar, II. 732 AMRIAI-CAIS, Arabian poet, II. 732 AMRITSIR, in Northern India, II. 732;

XVIII. 691. AMRU-EBN-AL-AS, a Saracen leader, IL 783, 470-burning of the Alexandrian library attributed to, IL 471; XIII. 381

Egypt subjugated by, VIII. 474; XVI. 512. AMRUM, island, II. 733

Amsanctus, pools of, XII. 637. AMSDORFIANS, a Protestant sect, II. 733. AMSDORFIANS, a Protestant sect. II. 738.
AMSTERDAM, II. 733.—corn trade of, VII.
402-3.—diamond cutting at, VIII. 4.—
athenæum at, XI. 590—bank of, XV.
488 — population of, 644; XI. 582.—early newspaper of, XVI. 202—
canal of, 55—weights and measures of,
XVI. 204 506.

island in South Sea, II. 785; IV. 268; XVIII 276.

- NEW, town of British Guiana, II. 735.

Amu, river in Bukhara, V. 758. AMULET, II. 735. Amur, river, IL 725; XVIL 607, 646.

AMU—ANA AMURATH, or Amourad L, sultan, II. 735; VIL 320; XXL 368, 376 - IL, emperor of the Turks, II. 735; VII. 320, XXL 368, 376 - III., emperor, II. 736; XXI. 369, - IV., emperor, III. 736, XXL 369, 376. Amusement, natural desire of, VIII, 169 AMUSETTE, small cannon, IL 736 AMWELL, II. 736. Amwoth, vitrified fort at, IX. 792 AMYCLÆ, a city of Laconia, II 736; XIII. 148-a Grecian colony, II 736 AMYGADALEZ, an order of plants, IL 736; V. 191. Amygdaline, VI 514, 518 AMYGDALOID, II. 786-in Iceland, XII. 202 Amygdalus, V 191. See Almond tree. Amylaceous constituents of plants, II 379 Amyridaceæ, nat. order of plants, V. 190. AMYLINE, II. 736. See Chemistry. AMYNTAS, II 736; XIII 761, 762, - a Greek writer, II. 736. AMYNTIANUS, a Greek historian, II. 736. AMYOT (Jacques), bishop of Auxerre, II. AMYRALDUS or Amyraut (Moise), II. 736 Amyridacese, nat order of plants, V 190 -region of, 228. Amyrtæus, Egyptian king, VIII. 466. ANA, IL 736. ANABAPTISTS, IL 741; XIV. 501-perse cution of, in the reign of Queen Eliza-beth, VIII 712-tumults by, in 1524, XIII. 731. Anabas, genus of fishes, IL 743; XIL 289, 290, Anabasis, II. 743; XXI, 950. Anabates, genus of birds, XVL 768 ANABATHRA, IL 743. ANABLEPS, genus of fishes, II. 743; XII. 219, 252, 253—eyes of, III. 95 Anabolæum, II. 743. Anacalypteria, II. 743. ANACAMPTIC, II. 743 Anacanthins, or Anacanths, order of fishes, XII 268-fossil, XVII. 128. Anacanthus, genus of fishes, XII. 327. ANACARDIACEE, nat. order of plants, II 743 ; V. 189. Anacardium, genus of plants, V. 190. See Cashew-nut. Ansceium, in ancient Athens, IV 163. Anacharis alsinastrum, American riverweed, XVII. 624. Anacharsus, the Scythian, II. 748.
——travels of, II. 743. See Barthelemy.
Anachoret, II. 743. ANACHRONISM, IL. 743. Anaclastic Glasses, II. 743. Anaclastics, II 743 ANACLETERIA, ancient festival, II. 743. ANACLETICUM, II. 743. ANACLETUS, or Cletus, Bishop of Rome, IL 743. anti-pope, II. 743.
Anacumteria, II. 743. ANACOMOSIS, IL 743. ANACOLUTHON, IL 743. ANACONDA, a large snake, II 744. ANACREON, II. 744; XVIII. 102-his address to the Cicada, IX. 168-Moore's translation of, XV 580. ANACREONTIC VERSE, II. 744. Anacrisis, II. 744. ANACRUSIS, II. 744. ANADEMA, II. 744. ANADIPLOSIS, IL 744. ANADYOMENE APHRODITE, II. 744. ANADYR, river, II. 744. ANÆSTHESIA, II. 744—anæsthetic agents VI 629; history of, 631, 632—induced by meamerism, XX, 433, 436—in surgical operations, 820. See Chloroform. Anapesto Paollucio, first doge of Venice, II. 744. Anaglyph, II. 744 Anaglyptography, VIII. 810 Anagnia, now Agnani, in Italy, II. 744. ANAGNOSTA (John), Byzantine historian. 11 ZAS

#### ANA-ANA

Anagros, Spanish grain-measure, II. 745.

Anahuac, ancient name of Mexico, IL.

683-plateau of, XIV 714, 715.

ANATTIS, an Armenian divinity, II, 745.

Analcime, mineral, XV 75-double re-

Anagnostes, IL 745.

Anahnattels, IL 683.

ANAK, IL 745

ANAGOGE, II. 745

ANAGRAM, II. 745

fraction of, XVL 542, 661. ANALECTA, IL 745 ANALEMMA, IL 745; VII 773; IIL 793. Analemmatic dial, VII. 792 Analepsis, IL 745. ANALOGY, IL 745—Butler on, VI. 32-Socrates fond of teaching by, XX 399 \_\_\_\_ in grammar, II 746 ANALYSIS, II 746—Condillac on, VII. 236, 237-algebraic, II. 482-logical, XIII 577-its application to electricity, VIII 531-ancient geometrical, XX. 300 See Geometry, new. Analytical Geometry, X. 542 ANAM, or An-nam, in south-east of Asia, II. 746. Anamesite rock, XV. 133 Anamnesis, II 746 ANAMORPHOSIS, II 746 ANAMOUR (Cape), II 746. Anampses, genus of fishes, XII. 267. Anan, kind of wood, XX. 173 Ananchidæ, echinoderms, XXI 991. Ananchytes, fossil echinoidea, XVII. 100, Anancitis, II. 746. Ananias, II 746. Ananisabta, II 746. ANAPEST, II. 746; IX. 770 Anapera, genus of insects, IX. 259. ANAPHORA, II 746. Anaphrodisia, IL 746. Anaplognathides, family of insects, IX. 123 ANARCHY, II. 746. Anarnacus, genus of mammalia, XIV. 230. Anarrhichas, genus of fishes, XII. 309, 310—the teeth and laws of, XVI. 424, Anas, genus of birds, XVI 818. ANASARCA, II 746; XVII. 690. Anaspis, genus of insects, IX. 134. Anastasius L and IL, Emperors of the East, II. 746 Bibliothecarius, II. 747.

Anastatic printing, XVIII. 553—in engraving maps, XXI. 336

Anastoma, fossil mollusks, XVII. 111. ANASTOMATICS, IL 747. Anastomosis, II. 747 — of arteries, 792—of veins, 796 Anastomus, genus of fishes, XII. 245. - genus of birds, XVI. 800. ANASTROPHE, II. 747. Anatase, mineral, XV. 110 Anatellina, genus of mollusks, XV. 350. Anathema, IL 747. Anatina, genus of mollusks, XV 850 Anatinidæ, family of mollusks, XV. 350. ANATOCISMUS, IL 747. ANATOLIA, or Natolia, II. 747; XV. 829; III. 758—coast of, IV. 744. ANATOMY (human), II. 747—Dr Barclay on its nomenclature, IV. 448—its importance in drawing, VIII. 178—study of, by artists, XIV. 458—progress of, 460 et seg—sub-divisions of, 463—nervous system, XVII. 672—history of, II. 748. See Surgery. (COMPARATIVE), III. 74-application of palæontology to, XVII. 91—spinal cord of the salmon, 669—web in the foot of a frog, 692. See Animal Kingdom, and the various zoological articles; Palæontology, Odontology. of Plants—the cells, V. 66—ves-sels, 69—nutritive organs, 76—leaves, 87-of the reproductive organs, 112. ANATOMY ACT, AND ANATOMICAL SCHOOLS, Anauxite, mineral, XV. 79. ANAXAGORAS, III. 114; X. 497; XVII.

ANA—AND 803; XX. 370, 373, 382-his contributions to astronomy, III 787, 788-his views on comets and the moon, I 568, 569-on the quadrature of the circle. XX, 520 Anaxander, Greek actor, VIII. 140. ANAXARCHUS, a Grecian philosopher, III. 115 ANANILAUS of Larissa, III. 115 ANAXMANDER, a Greek philosopher, III 115; XII 459; XVII 231—his map, X. 466—his knowledge of astronomy, III. 787; of geometry, X. 497 ANAXYMENES, a Greek philosopher, III. 115; X. 497; XII. 459—his astronomy, III 787 - Greek historian, III 115. ANAZARBUS, city of Cilicia, III. 115 Anbar, town of Asia, III 115 ANBERTKEND, Bramin book, III. 115. Anca, Portuguese town, III. 115 Ancach, in Peru, XVII 474 ANCASTER, in Lincolnshire, III 115. Ancenis, in France, III, 115. ANCESTORS, III. 115 Anchinæa, genus of mollusks, XV 336 ANCHISES, III. 115 Anchomenus, genus of insects, IX 94 Anchonus, genus of insects, IX. 140. ANCHOR, III 116-weighing anchor, XX. 18-expediency of testing, XIV. 290improvements in the form and manufacture of, XX. 24—Rodgers', ib — Trotmans', 1b - GROUND, III. 121 m architecture, III 122.

Anchor escapement, VII 8.

Anchorella, genus of entozoa, XXI 982. Anchovy, XII 236, 237-on the coasts of Norway, XVI 328—as an article of food, IX. 764—imports of, from Leghorn, XIII. 317-fishery, XX. 247. ANCHUSA, genus of plants, III 122; V. 201. Anoienty, III. 122. ANCILE, III, 122. ANCILLARIA, or Ancilla, genus of mollusks, III. 122; XV. 386—A. obtusa, 1b.—

ANCHYLOSIS, III, 122. ANCIENT DEMESNE, III. 122.

history, XI. 542, 543.

wines, XXI. 882.

fossil, XVII. 110. Ancillon (J. P. Friederich), historian, III. 122—on the doctrines of the French and German schools of philosophy, I

187. ANCLAM, III. 122. See Anklam ANCONA, an Italian city, III. 122, XVII 241—evacuation of, by the French, X. 214.

ANCOURT (Florent Carton d'), III. 122, Ancrum Muir, battle of, XIX. 776. ANCUS MARCIUS, III. 122; XIX. 296. ANCYLOBLEPHARON, III 122. Ancyloceras, fossil mollusks, XVII. 113. Ancylodon, genus of fishes, XII. 285. Ancyloglossum, III 128.

Ancyloscelis, genus of insects, IX. 200. Ancylus, genus of mollusks, XV. 374. Ancyra, III. 123. See Angora. ANDALUCIA, III. 123; XX. 493—climate of

Andalusite, mineral, XV. 86.
Andaman Islands, III. 124—language,
XIII. 208; IX. 344—degraded state or

the natives, I. 451. Andante, in music, III. 125. Andegavi, a Gallic tribe, III 125. ANDELYS, in France, III. 125. Andena, III. 125.

ANDENNE, town of Belgium, III. 125. ANDERAVIA, or Inderabia, Island, III. 125; XII. 372. ANDERNACH, III 125.

Andersen (Hans C.), his novels, XIX. 293, 696.

Anderson (Adam), III. 125. - (ALEX.), mathematician, III. 125; X. 504.

(SIR EDMUND), III. 126. (JAMES, LL D.), III. 126-his culture of the bread-fruit, V. 801—his theory of rent, XVIII. 243, n.

#### AND—AND

Anderson (James W.S.), antiquary, III 126 — (Prof. John), founder of the Andersonian Institution, Glasgow, III 126, X. 652-on evapolation, IX. 412,

(ROBERT, M D.), III 127. (Mr), his visit to Lake Ngami, XVI 240.

on gunnery, XI 103, 107.

ANDES, III 127; II 668, XVII 598—
their geology, II 670; VI 542—snow
level on, XVII 602—their influence on the climate of South America, II 671were the chief seats of ancient American civilization, 683—the Deluge ascribed to the elevation of, VII. 720—of Bolivia, IV. 821—of Chili, VI 542 of Colombia, VII. 133-of Ecuador, VIII 386—silver mines of, XV. 235—of Peru, XVII. 470—height of, 644, 645—of La Plata, 776

- birth-place of Virgil, III. 132 Andesin, mineral, XV 71. Andesite, rock, XV 132
ANDOCIDES, an Athenian orator, III, 132 Ando-Peruvian tribes of South America. IX. 349.

Andorra, or Andorra, republic of, III 132. Andover, town in Hampshire, III. 132 in Massachussetts, III. 132; XIV 340.

Andrada (Diego de Payva d'), III. 132. ANDRADA E SYLVIA (Bonifacio Jozé d'), III. 132.

(Antonio d'), his travels in Asia, III 753.

Andreacee, sub-order of mosses, V. 217 André (John), III. 132, 670—execution of, XXI 753.

— (Père), on beauty, IV 538

ANDREA DEL SARTO, III. 133, XVII 66

— (GIOVANNI), canonist, III 138,

— (GIOVANNI), bishop of Aleria, III.

of Pisa, III. 133. See Pisano. Andreæ (Johann), III. 133. Andreani (Andrea), wood-engraver, III

——— (Paul), aeronaut, II. 177.
Andreanofskie islands, II. 464.
ANDREAS, OT Andre (St), town in Hungary, III. 133.

of Carystus, surgeon, XX. 811. ANDREASHERG, IN Hanover, HT. 133.
ANDREINI (G. Battista), HI. 133.
ANDRELINI (P. Fausto), III. 138
Andrena, genus of insects, IX. 198. Andrenetæ, section of insects, IX. 198. Andreossy (Antoine-François), Comte d', III. 133-his description of hydraulic obelisks at Constantinople, III. 335on the canal of Languedoc, XII. 118,

Andres' (Juan), III. 184
Andrew (St), III. 184—an order of knights, ib.; XIII. 120, 122—St Andrew's day, III. 134.

Andrews (St), city, III. 134—railway company of, IX. 546—university of, III. 135; XXI. 472; colleges at, 478-university library, XIII. 403.

Professor), of Belfast, his researches in thermo-electricity, XXI. 653.

(I. D.), his report on the lakes of Canada, VI. 138, 139.

(JAMES PETTIT), III. 136. (LANCELOT), bishop, III. 137. (Dr), his lock, XIII. 539

Andrez (Abbate), on the history of paper. XVII. 251.

Andria, a Neapolitan city, III. 137. Andriantes, III 137 ANDRIEU (Bertrand), III. 137.

Andrisous, III. 137. ANDROCLUS, III. 137.

Andrœcium, or staminal organs in plants, V. 118, 126.

Androgeos, III. 137. Androides, III. 137. Androlepsia, III. 188.

ANDROMACHE, wife of Hector, III, 188. ANDROMEDA, in astronomy, III. 138; IV. 80.

#### AND-ANG Andromeda, genus of plants, III 138;

V. 221; XI. 748

Andronicus I, Comnenus, III 139. - II., Palæologus, III 139 of Cyrrha, III 139. of Rhodes, III. 139-his edition of Aristotle's works, III. 537
— (Livius), XIII 527; VIII. 141—poetry of, XVIII. 104. Androphagi, III 139 Andros, now Andro, island, III 139. Andry and Thouret's report on the use of magnets in medicine, XX 415.
Andreceow, in Galizia, III 140. ANDUJAR, a city of Spain, III 140 ANDUZE, a town of France, III. 140. ANECDOTES, III. 140 Anegada, one of the Virgin Islands, XXI. ANEL (Dominique), surgeon, III 140. Anellida, fossil animals, XVII 100. ANEMOMETER, III 140; XIV. 651, XVIII. Anemometry, XIV. 651. ANEMONE, genus of plants, III. 140; XI. 752 Anemoscope, III. 140; IV. 452. Anemur, III. 140 Anenchelum, genus of fossil fishes, XII. ANEROID BAROMETER, III 140; IV. 459 —use of at sea, XX. 27 ARET, a French town, III. 140. ANEURISM, III. 140—ancient treatment of, XX. 814—John Hunter's operation for the cure of, 819-surgical treatment of, 828-in animals, XXI 574 Anfrye's essaying furnace, III. 768, 769. Angar, island, III 140. Angara, Upper and Lower, rivers, III 140; XXI 954. Angari, or Angari, III. 140 Angaria, III. 140. See Angari. Angazia, island, III 140. ANGEIOTOMY, in surgery, III. 140 ANGEL, III 140-hierarchy of angels, according to the Gnostics, III 811, n 1notions of the Mohammedans respect ing, XV. 302-the apocalyptic, XVIII 481—of Jehovah, XXI 209.

a gold coin, III. 141. Angel-fish, in Cornwall, VII. 408 ANGELICA, genus of plants, III. 141; XI. 745—fruit of, V 195—used as food in Lapland, XIII. 285, 240. - library, at Rome, XIII 412. ANGELICI, sect of heretics, III. 141. ANGELICS, an order of knights, III. 141. Angelin (M.), on the Silurian rocks of Scandinavia, XV. 197, 198. Angelini (B), his work on insects, IX. 15 Angelique (Merc), of Port Royal, III 668; XVIII. 376 ANGELO (Michael), III. 141. See Michael Angelo Buonarotti. (St), several towns and castles in Italy so named, III 141. (St), castle of, XIX. 365, and n. 4; ANGELUS SILESIUS, III. 141. — (Isaac), emperor, III. 139; VII. 317. ANGER, III. 141—properly regulated, becomes a sense of justice, I. 407. ANGERBURG, a circle in Prussia, III. 141. Angerman, river, XX. 861. ANGERMANNLAND, III. 141.
ANGERMUNDE, in Prussia, III. 141.
ANGERONA, Roman deity, III. 142. Angers, in France, III. 142—population, X. 277. ANGERSTEIN (John Julius), III. 142. ANGHIERA, town in Lombardy, III 142 ANGILBERT (St), III 142. Angina Peccoris, III. 142. Angionoma, vascular growth, XVII. 690. Angiospermous plants, V. 189, 287—reign of, in geological times, 237. ANGITIA, III, 142. Anglarite, mineral, XV. 161.

Angle, III 142; X. 507—of incidence, III 143-of refraction, fb -trisection of, ib.—solid, X. 582—angle formed by two inclined planes, XII. 807—instru-

ANG-ANI ment for measuring the angles of crystals, XV. 50-joining angles, in joinery, XII. 809—Dollond on measuring small angles, VIII 93, 94. Angle-berries, disease in animals, XXI, Angler, fish. See Lophius. Angles, old German nation, III 146 ANGLESEA, or Anglesey, island, III. 146; VIII 754—cattle of, II 343—earthenware filters, IX. 582-Druids in, VIII. 183. Anglesea (Arthur, earl of), III 219. (Marquis of), communications to, on Catholic emancipation, V 654-lordheutenant of Ireland, XIL 501. Anglesite, mineral, XV, 105 Anglia, origin of the name, III. 146 Angling, III. 146-popularity of the pursurt, IX. 613-for charr, XII 241-Isaac Walton's book on, XXI. 696—hst of books on, III. 162-165 Anglo-Calvinists, III. 165 Anglo-Norman Gothic architecture, III. 480 \_\_\_\_ castles, VI 326. Anglo-Saxon, III 165—written characters of, IL 615-language, V 374, VIII 793—versions of the Scriptures, XIX. 840—institutions, VIII. 665—domestic habits, 666-military system, XV. 6, 7 –Rask's grammaı, XVIII 808—thar XXI 163—Turner's history of, 390 population of America, II. 709.

Anglus (Thomas), III. 165 See White Angola, or Dongo, in Africa, III 165. IL 227. ANGON, III. 166 Angora, in Asia, III 166—goat of, XIV.
211; its wool, XXI 906.
— battle of, XXI 368 Angorno, town in Central Africa, III. 166. ANGOSTURA, in South America, III 166congress of, in 1819, IV 818. ANGOT, in Abyssinia, III 166, II. 56 ANGOULEME, in France, III 166 - Duke d', his Spanish expedition, X. 185; XX. 476. Angoumois, in France, III. 166; X. 277. Angov, III. 166. Angra, a city in Terceira, III 166 ANGRI, a Neapolitan town, III 167. Anguide, family of reptiles, XIX. 41
Anguier (Francois and Michel), III. 167 ANGUILLA, island, III 167 genus of fishes, XII 232, 230 angling for A. vulgaris, III. 162
genus of fossil fishes, XI 347. Anguillara (G. Andrea dell'), III 167 Anguillidæ, family of fishes, XII 232, 230. Anguilliformes, family of fossil fishes, XII. Anguine Syren, XIII. 460. See Proteus anguinus. ANGUINUM OVUM, fabulous egg, III. 167; VIII 188. Angus, genus of reptiles, XIX. 41. ANGUS, county in Scotland, III. 167. See Forfar. - (Earl of), XIX. 767, 769, 770. ANGUSSOLA, four sisters, painters, III. 167. Angustestellatı, echinoderms, XXI. 991. ANGUSTICLAVIA, III. 167. Angustura, tonic bark, V. 189. Anhæmia, disease of miners, XIII 460. ANHALT, duchies of, in Germany, III. 167. ANUALT-BERNBURG, III. 167. ANHALT-COTHEN, III. 168. ANHALT-DESSAU, III. 168. ANHOLT, Danish island, III. 162. Anhydrite, mineral, XV. 96. ANIANI Breviarium, III. 168; VI 743. Amanus (Flavius). See Avianus. ANICHINI (Luigi), IIL 168. ANIELLO, III. 168. See Massaniello. Aniline, VI. 514. Animals, III. 168—changes on European animals naturalised in America, II. 714 -difficulty of defining the term, III. 168-wherein different from plants, 168,

169—chemical characters of, 170—substances of which composed, 171—har-

#### ANI—ANK monious combination of their organs, 172

-variety of organisation among, ib classification of, 182 et seq; IL 771-of Linnæus, III. 184; Virey, ib., Lamaick, 185; XIII. 162; Dumeril, III 190, Blamville, 1b; Macleay, 191; Cuvier, 192-no change of species produced by time, climate, or other secondary cause 173—geographical distribution of XVII. 630, III 174, II 712—what constitutes a species, III 174—hybrids, XII 63; generally barren, 1b , III. 174-doctrine of equivocal generation, 175brain and nervous system in different classes of, 176 (see Brain)-tenacity of life in certain kinds, ib. 177-insensi bility to pain in many, ib -senses of, 178-aliment of, 179-nature of the flesh ın different classes, 1b —power of enduring abstinence from food, 180; IL 50food of, 418-hybernation of, III. 180; XIL 62-paving, III 181-obscure case of animal and vegetable life combined, 198, 200-electricity of, VIII 570-wor ship of, in Egypt, 439; XV. 765—effects of electricity on, VIII. 610—effects of light on, XIII. 460—light emanating from, 458-hieroglyphic symbols of, XL 392—figures of, borne on arms, 331, 332, 333—hospital for, 470—adaptation of their covering to the chimate they inhabit, 262—Gesner's history of, IX. 597 -kinds used as human food, 761-strength of, XIV 416, 417-duty we owe to, XV. 566-definition of the term, XVII. 91-geological succession of, 92—total number known, 631—form of seminal particle in, 683—fecundation, 1b -modes of propagation, 688 -development of the ova in, 684necessity of air to, XVIII 72-their tendency to increase in a geometrical progression, 338—superiority of small animals in strength and agility, XX. 770 — effects of galvanism on, XXI. 609, 634—extinct (see Palæontology)— of America, II 718—Arabia, III 345— Assam, 764-Canada, VI 142-Europe, IX. 387. See the geographical articles, also Zoology, Ichthyology, Ornithology, Mammalia, Odontology, Palæontology, Animal bodies, characteristics of, II. 771 —chemistry of, VL 501 et seq, 521—more easily dyed than vegetable, VIII -effects of electricity on, 601. - FLOWER, III. 168. - food, VIII 23; IX. 761—preservataon of, 767 heat, XVIL 665 - MAGNETISM, III. 193; XX. 413. - manures, II. 407 mechanics, as applied to medicine, KINGDOM, III. 168-Cuvier's work on the, VII. 605. —— oils, XVI. 492, 493. poisons, XIV. 439 ANIMALCULE, III. 193-patches of the ocean coloured by animalcules, XVII 574-cretaceous formations composed of, 588-as microscopic objects, XIV 806-Spallanzani on, XX. 496, 497-intestinal, XXI 975. Animation, III. 213-of style, XIX. 141. ANIME, a resm, III 213-its use in making varnish, XXL 526. ANIMETTA, III, 213 ANIO, now Teverone, river, III 213
ANISE, an umbelliferous plant, III. 213. Aniseed, oil of, XVI. 497. ANISO, III. 213. Amisomera, genus of insects, IX.227. Anisonyx, genus of insects, IX. 126. Anjar, in Hindustan, III. 213. Anjengo, in Hindustan, III. 213 Anjou, in France, III. 213; X. 277—dukes of, XI. 571; XVIII. 148.
Anka, Egyptian deity, VIII. 436.
Ankee, liquid measure, III. 213. Ankerite, mineral, XV. 100. Ankerstrom, assassin, V. 543; XX. 859. Anklam, a circle in Prussia, III. 213.

#### ANK-ANO

Ankle-joint, III. 37-surgical treatment of its dislocation, XX, 826. ANKOBAR, in Abyssinia, III. 213. Anlaff, VIII 658.

ANN, or Annat, in law, III. 213.

Anna, or Ana, an Arabian town, III 213.

Comnena, daughter of Alexius
Comnenus I, III. 213 - Ivanovna, empress of Russia, III.

- Perenna, ancient divinity, IIL 214. Annaberg, German city, III. 214.

Annage, island, III, 214 Annals, III. 214-of Tacitus, XXI. 4-in what respects different from history, ib

-Hailes' Annals, VII. 634. ANNAMABOE, on the Gold Coast, III. 215; XL 89.

Annan, in Dumfriesshire, III. 215; VIII 238.

river, III 215, XVI. 87, XIX. 790—close-time in, IX. 613.

Annand (William), dean of Edinburgh,

TTT. 216.

Annapolis, town in Maryland, III. 216; XIV 331—Washington's resignation at, XXI 753—naval academy at, 430 convention at, 437.

— county, town, and river of Nova Scotia, III 216; XVI. 343.

ANNE, queen of Great Britain, III. 216reign of, V 447—her death and character, 452—her navy, XVI 98 newspaper press under, 183 - Ire-land in her reign, XII. 492-act for consolidating the post-office, XVIII 406. BOLEYN, queen of Henry VIII., III. 217, VII. 482; VIII. 699, 701.

- of Cleves, queen of Henry VIII., VIII. 704.

empress of Russia, XIX. 481.

Anne's (St) day, III. 217.
Annealing, III. 218—of metals, VII 92; XX. 756—of the specula of telescopes, XXI. 135.

ANNECY, in the kingdom of Sardinia, III. 219; XIX. 633, 640.

Annelides, or Annelida, class of articulated animals, III. 219, 192; XL 290, 293, and n. 1—works on, ib. See Helminthology.

ANNIVERSARY, III 219. Annobom, African island, III. 219. ANNONÆ PRÆFECTUS, III 220 Annonay, a town of France, UL 220.

Annotta See Anotta ANNUALRENT, III 220.

Annual plants, XL 750, V. 77; HL 17L rings, in trees, XXL 268 - means, in meteorology, XIV. 664.

Annustants, their lives not so select as is generally supposed, III. 225.

Annuities, III 220—tables of, 251—appli-cation of algebra to the calculation of, II 536; III 242-Government loss by, V. 651—expectation of life in different countries, XII 395; XVIII. 351, 353; in England, 355—purchasable by savings banks, XIX. 667. See Life Assurance, Probability.

Annuity-Tax in Edinburgh, VIII. 398 ANNULAR, III. 257—crystal, 1b—eclipse, ib; IV. 44, 48-lenses, XIII. 472. Annularia, fossil genus of plants, III.

ANNULET, III. 257-in architecture, 50:in heraldry, XI 326, 330-in joinery, XII. 808.

ANNUIOSA, a primary division of the animal kingdom, III. 257, 191, IX. 60. ANNUNCIADA, order of knighthood in Savoy, III. 257.

Annulus and annulate, in betany, V. 143. Annunciation, III 257; VI 667. Annus deliberandi, III 257.

Anol., a quadruped, IH. 257. Anolium, genus of insects, IX. 112. Anodon, genus of mollusks, XV. 349. ANODYNE, III. 257. Anolius, genus of reptiles, XIX. 34.

#### ANO-ANT

ANOMALISTICAL YEAR, III. 257. ANOMALOUS, III. 257 Anomia, genus of mollusks, XV. 348, 347. ANOMEANS, III. 257. Anonaceæ, nat. order of plants, V. 180 Anonymous, III. 257—books, IV. 711. Anopheles, genus of insects, IX. 225. Anoplus, genus of fishes, XIL 277. ANOPLOTHERIUM, genus of fossil mammals, III 257; XVII 164—teeth of, XVI 465. Anorthite, mineral, III. 257; XV. L. ANOSMIA, III. 257. Anostoma, genus of mollusks, XV 373. Anotia, genus of insects, IX. 169 Anorta, or Arnotto, a dye, III. 257;
VIII. 296; II. 86, V. 183—used to
colour cheese, VII. 625; and silk, IV.
770—in Guiana, XI. 82—imports of,
VIII. 784—order of plants, V 183 Anous, genus of birds, XVI 813 ANQUETIL (Louis Pietre), III. 258.

DU PERRON (Abraham Hyacinthe), ANSÆ, in astronomy, III. 259. Ansairêyeh, Syrian sect, XX. 908 Ansanto, lake, XX. 239. Ansarians, people of Syria, III. 259 Ansbace, in Bavaria, III 259 Anse, ancient French town, III. 259. ANSE, ancient French town, III. 259.
ANSELM (St), archbishop of Canterbury,
III. 259, I. 325; VIII. 669—on the
existence of God, XXI 187.
— of LAON, III. 260; II. 26.
Anser, genus of birds, XVI 816. Anson (George, Lord), III. 260—his expedition to the South Sess, V. 459, XVI. 106—his visit to the Ladrone Islands, XIII. 150; XVIII. 269-parrative of his voyage, XIX 235.

(General), XVI. 303.

Ansted's arrangement of rock formations, V. 233 - his manual of geographical science, XVII. 642. Anster (Christopher), comic writer, III. 260. Anstone, building-stone, XX. 712. Anstruther (Easter and Wester), in Fifeshire, III. 260, 261. Ant, III. 261; IX. 193; XVII. 687 acid of the red ant, VI. 627. – amazon, III. 266. – parasol, XVII. 637. white, or Termes, IL 218; IX. 179; XVII. 637. ANT-BATER, III. 266; XIV. 191, 192; XVII. 631—its teeth, III. 103; XVI 413, 414, 440. ANT-BILLS, III. 266, 263. Ant-lion, IX. 178—Bonnet's investigation of its habits, V. &.
Antages, III. 266. ANTA, in architecture, III. 266, 487, 502. ANTÆOPOLIS, ancient city on the Nile, ANTEUS, giant, III. 266; XIV. 360. Antalcidas, peace of, XX. 501; XXI. 177. ANTALO, Abyssinian town, III. 266. ANTANACLASIS, III. 266. ANTANAGOGE, III. 266. Antanadrus, VI. 284. Antao (St), one of the Cape Verde Islands, XXI. 543, 544. ANTAR, III. 266. ANTARCTIC, III. 267 — polar regions, XVIII. 181—pole, X. 481—ocean, XVIII. 576—botanic region, V. 228.
Antares, star, III. 267; IV. 79.
Anteambulones, III. 267.
Antecedent, in grammar, X. 757, 758—in geometry, 517. ANTECESSOR, III. 267. ANTECURSORES, III. 267. ANTEDILUVIANS, III. 267. Antefixe, in architecture, III. 507. Antego, III. 268. See Antigua. ANTEJURAMENTUM, III. 268. Anteleopus, genus of fishes, XII. 270. Antelme (Adr.), his work on insects, IX. ANTELOPE, III. 268; XIV. 210-number of species, XVII. 632—African, II. 217—Indian, XI. 455.

ANT-ANT ANTELUCAN, III 268. ANTENNE, ancient city of Latum, III. ANTEMURALE, III. 268. ANTENATI, III. 268. ANTENCLEMA, III 268. Antennæ of insects, IX. 36—their func-tions in ants, III. 262; and in bees, IV of the crustacea, VIL 537-of myriapods, XV 747. ANTENOR, Athenian sculptor, III. 268. Trojan prince, III. 268.
Antepilani, III. 268. ANTEQUERA, IN Spain, III. 268. ANTEROS, one of the two Cupids, III. 268; VII. 590. ANTESIGNANI. III. 268 ANTESTARI, III. 268 ANTHELMINTICS, III, 268 ANTHEM, III, 268. ANTHEMIS, a genus of plants, III. 268; V. ANTHEMUS Roman architect, III 268-his plan of the dome of the church of St Sophia at Constantinople, 402-on, Ar chimedes' burning mirrors, VI. 4. Anther, in botany, V. 118, 126. Antheridia, V. 143, 145. Anthesphoria, ancient Sicilian festival TIT. 268 ANTHESTERIA, Athenian festival, III. 268 ANTHESTERION, the eighth month of the Athenian year, III. 269. Anthia, genus of insects, IX. 81 Anthiacum, genus of insects, IX. 199. Anthias, genus of fishes, XII 275, 276. Anthodes, tribe of insects, IX. 134. Anthidium, genus of insects, IX. 200. Anthobu, section of insects, IX. 126. Anthocephalus, genus of zoophytes, XXI. Anthocrinus, fossil echinoderms, XVII. 98 ANTHOLOGION, III. 269 ANTHOLOGY, III. 269. Anthomyia, genus of insects, IX. 250. ANTHONY (Saint), III. 269; XV. 406-knights of, III. 269-St Anthony's fire, IIL 269; IX. 329. Anthophila, family of insects, IX. 198. Anthophora, genus of insects, IX. 100. ANTROPHORUM, in botany, III. 269. Anthophyllite, XV. 81. ANTHORISMUS, in rhetoric, III 269. Anthosiderite, mineral, XV. 90. Anthosoma Smithii, VII. 543. Anthozoa, fossil polypes, XVII. 96 \_\_\_\_\_ zoophytes, XXL 1002. Anthracite, IIL 269; IV. 782; VII. 118, 471; XV. 123, 149-area of, in Pennsylvania, VII. 127; XVII. 895-in Kilkenny, XIII. 84--employed in reducing iron ores, XII. 544—evaporative power of, XX. 653—its value as fuel, 353. - furnace, III. 769. Anthraconite, XV. 92

Anthracosis, fossil moļlusks, XVII. 108.

Anthrenus, genus of insects, IX, 115.

Anthribus, genus of insects, IX, 138. Anthropoglorius, III. 269.

184, 196 See Man.

ANTI, III. 270.

ANTHROPOMORPHOUS, III. 269.

Anthropoides, genus of birds, XVL 798.

Anthropological argument for the exist-ence of God, XXI. 186.

ANTHROPOLOGY, III. 269; IX. 341; XXI

ANTHROPOMORPHISM, III. 269; I. 109, n. 2.

ANTHROPOMORPHITES, ancient heretics, III.

ANTHROPOPHAGI, III. 269. See Cannibal. Anthus, genus of birds, XVI. 757.

ANTIBACCHIUS, a foot in ancient poetry

Antiburghers, XVIII. 499—division among them, XIII. 758—their reunion with

ANTHYPOPHOBA, in Thetoric, III. 270.

ANTIARINE and ANTIARIS, III. 270

ANTIBES, French seaport, III. 270.

the burghers, 500.

ANTHRAX, III. 269-genus of insects, IX.

#### ANT-ANT

ANTICHRIST, III. 270. ANTICETHONES, III. 271 ANTICIPATION, in music, III. 271
ANTICIMAX, in rhetoric, III. 271. Anti-corn-law league, XIV. 256 Anticor, disease in animals, XXL 557 ANTICOSTI, Island, III. 271. ANTICUM, III 271 ANTICYRA, name of three cities of ancient Greece, III. 271 Antidesma, genus of plants, III. 271 Antidoron, III. 271. Antidosis, III. 271. Antidotes to poisons, XIV. 432 et seq; XVIII. 133 ANTIGALACTIC, III. 271 ANTIGONUS I, III. 271; VIII. 468 —— II (GONATAS), III. 272; IV. 172 Antigorite, mineral, XV. 80. ANTIGRAPHUS, III. 272 ANTIGUA, Island, III. 272 - (La), city in Guatimala, XI 78. Antilegomena, III. 272. Anti-Libanus, XVII. 182; XX. 903 ANTILLES, or Cambbee islands, III 272-Greater and Lesser, XXI 837-serpents of, XIX. 54. ANTILOGARITHM, III. 272. ANTILOGY, III 272. ANTILOIMICS, III. 272 Antilope, genus of mammalia, XIV. 209—fossil, XVII 170. Antimensium, III. 272 ANTIMERIA, III. 272. Antimonic acid, VI. 494; XV. 61. Antimonious acid, XV 61. Antimonite, XV. 119. ANTIMONY, III. 272; VI 494; XV. 65, 114 —white, 112, ores, 1b—oxide, 61—lo-caltues producing, 246; XVII. 622— in galena, XIII 299—sometimes poisonous, XIV 434—specific gravity of, XII 88—in Chile, VI. 548—in Scotland, XIX. - ore, gray, XV. 118

Antimony-ochre, XV 112. Antimony-silver, XV. 113 Antanony-suver, X.V. 113
Antanoe, rums of, VIII. 504.
Antroomass, III. 273 — Gnostic antinomians, I. 521, their corruptions of Christianity, ib—their theory of moral distinctions, VIV. 504. distinctions, XV. 543. ANTINOUS, III. 273.

ANTIOCH, III. 273; XX. 901, 910-aque duct at, III. 334—mundane era of, VI. 671—Cæsarean era of, 672—coins of, XVL 379—earthquake at, XVII. 616. in Pisadia, III 275.

ad Taurum, now Aintab, III 275; IL 430. Antiochian, sect and epocha, III. 275

ANTIOCHUS, a dynasty of Syrian kings, III. 275.

- Soter, III. 275. - the Great, VIII. 469 — his war with the Romans, XIX. 312, 314.

of Ascalon, philosopher, III. 275

Epiphanes, III. 275—his invasion of Egypt, VIII 469—his treatment of the Jews, XII. 732, 768; XVII. 193-Jerusalem laid waste by, XII. 733.

ANTIOPE, III. 275. ANTIPÆDOBAPTISTS, III 275; II. 741. ANTIPAROS, Island, III. 275. ANTIPAS HEROD, III, 275: XII 770. Antipastus, in Prosody, IX. 770.
Antipater, III. 275; XIII. 773 et seg. - an Idumean, III. 276; XII. 770. - Cæhus, III. 276. - of Sidon, III. 276.

Antipathana, zoophytes, XXI 1004. Antipatha, III. 276—therapeutical system, XI. 606, 607,

Antipellus of Egypt, painter, III. 276.
Antipellus regimen, III. 276 —
theory, VI. 352—in veterinary science, XXT. 555

ANTIPHON, III. 277. geometer, X. 498—on the quadrature of the circle, XX. 520. ANTIPHONARY, III. 277. ANTIPHONT, III. 277.

#### ANT—ANU

ANTIPODES, III. 277; X. 485. ANTIQUARII, monks, copiers of old books. III. 277.

Antiquary, III. 277—Scottish Society of Antiquaries, VIII. 397—Society of, London, XIII. 674. ANTIQUE, IIL 277.

ANTIQUITIES, III. 277--academies of, II. 69—pleasure from the study of, IV. 545—in the British Museum, XIII. 674 -of Greece, XI. 21-Indian, II 696-Central America, XI. 77-Mexico, XIV 719-Cornwall, VII 408-Devonshire, 764—their relation to phi-lology, XL 527—Roman, XIX. 367. See Rome. See Medals, Athens, Egypt,

Antirrumum, a genus of plants, III. 277. ANTISABBATARIANS, modern religious sect, III 277.

Antiscii, III. 277 ANTISEPTICS, III. 277; IX. 767; XIX. 621. Antisian, tribes of South America, IX. 349. Antispasmodics, III. 278 ANTISTASIS, in oratory, III 278

Antisthenes, Greek philosopher, III. 278; I. 316; VII. 608; XVII. 791—his au-miration of Socrates, XX. 379. ANTISTROPHE, III. 278

ANTITACTÆ, sect of Gnostics, III. 278. ANTITHESIS, in rhetoric, III 278 ANTITRINITARIANS, III 278.

ANTITYPE, III 278 ANTIUM, city of the Volsci, III. 278. ANTIVARI, III 278.

Antlers, XIV 203; XVII 171. Antlia, an ancient machine, III. 278. - the proboscis of lepidopteious in-

sects, III. 278 ANTŒCI, III. 278; X. 485. ANTOINE (St), town of France, III. 279. ANTONELLO da Messina, III. 279.

ANTONIA, fortress in Jerusalem, III. 279; XII. 733, 744 Antonian Waters, III. 279. Antoniano (Silvio), III. 279. Antonides (Hans), Vander Goes, Dutch

poet, III. 279 ANTONIN (St), town of France, III 279. Antonini Itinerarium, III 279, X. 403. ANTONINUS LIBERALIS, III 279

MAGNING LIBERALIS, III 2/1)

Marcus Attracture, the philosophen, Roman emperor, III 279—neign of, XIX. 344—lis patronage of science, XIV. 494—English tanslation of his Meditations, XV. 526.

- Prus, Roman emperor, III. 280 reign of, XIX. 343-his account of the Christians, VI 641—condition of the Jews under, XII 775, XVII. 195. ANTONINUS'S WALL, III 281, V. 879.

Antonio (Nicholas), III. 282. (Dom), prince of Portugal, XVIII. 384

 bishop of Spalatro, XIII. 449.
 (Port) in Jamaica, XII 677. ANTONIUS (Marcus), Roman orator, III. 282.

- (Marcus) triumyir, III. 282; VL 763; XIX 328 et seg.-his rule in Egypt along with Cleopatra, VIII. 471-his war against the Parthians, XVII. 312. Antonomasia, III. 283; XIX. 184 Antosiandrians, a Lutheran sect, III.

222 ANTERM, county in Ireland, III. 288—town, 286—basalt of, XV 190—agricultural statistics of, XII 516, 517. Antrimolite, mineral, XV. 75.

ANTWERP (Anvers, in French), III. 286—commerce of, VII. 188; IV. 598—polyglot Bible of, 697; XVIII. 266bombardment of, in 1830, IV. 606siege of its citadel in 1832, 610; IX. 826; X. 208—taken by the Duke of Parma, XI. 571-Royal Academy of the Fine Arts at, IV. 622-railways, XI. 582—laid waste by the Spanish troops, 569—phocene rocks near, XV. 215
—works of Rubens at, XIX. 459.
Antyllus on surgery, XX. 818.

Anubis, or Anup, Egyptian deity, III. 287; VIII. 489; XI. 386.

#### ANU-APH

Anus, muscles of the, III. 39. Anvil., III 288; V-anvil, XII. 564—an-chor-smiths', III. 120. ANVILLE (J. B Bourguignon d'), III 289

-on the extent to which the ancients were acquainted with the coasts of Africa, IL 209-his contributions to

geography, X 473 Anwari, Persian poet, III. 290. ANWEILER, in Landau, III 290. Anysis, Egyptian king, XL 889

Anytus, one of the accusers of Socrates XX. 380, 392, 395 Anzin, French village, III. 290. Anzuan, island, XII 789.

Aodon, genus of mammalia, XIV 231 tense of Greek verbs, III 290, AORIST, X. 765.

AORISTIA, III 290. Aorta, anatomy of, III. 65-distribution of its branches, ib.—its anatomical connections, II. 791—tying of the, XX.

829. n. Aosta, town and province of Piedmont, III 290; XVII 707

APÆDUSIA, III. 290. APAGOGE, III 290

APAGOGICAL DEMONSTRATION, III 290 APAGON, a genus of fossil fishes, III. 290 APAGYNOUS plants, III 290.

APALACHIAN mountains, III. 290. See Appalachian Mountains

APAMEA, name of several ancient cities of Asia, III. 290.

APANAGE, III. 290. Apatelite, mineral, XV. 97.

Apateon, genus of fossil reptiles, XVII.

APATHY, III 290.

APATITE, mineral, III. 291; XV 93commission sent to examine it in Estremaduia, II. 415-crystallization of, VII 561

Apatura, genus of insects, IX. 208. Apaturia, Athenian feast, III 291. APAULIA, III 291.

APAUMEE, in heraldry, III 291 APE, III 291; XIV. 137—apes at Gibraltar, X. 619.

A-PEAK, sea-term, III. 291. APEL, or Apellus (Johann), III 291. APELLES, III. 291-hrs style of painting,

APELLICON of Teos, III. 292 - the works of Aristotle preserved by, 536.
APELLITES, heretics of second century, TIL 292

APENNINES, III 292 . IX. 382; XII. 635; XVII. 241; XX. 235; XXI. 392— heights of, XVII 642; XX. 235—geo-logy of, ib—barley and oats extensively grown on, XXL 394.

APENRADE, city in Schleswick, III. 293. Apep or Apophis, Egyptian deity, VIII. 438.

APER, the wild boar, IIL 293, XIV 797. APERIENT, III. 293.

APERTURE, in geometry, III 293 in optics, III. 293; XVI 554 Apetalæ, sub-class of plants, V. 203.

APETALOSE, plants, III. 293. APEX, III. 293, 294. APILÆRESIS, III, 294

Aphanese, mineral, XV. 103. Aphanisticus, genus of insects, IX. 105. Aphanite, rock, XV. 135.

Aphareus, genus of fishes, XII 288. APHER, name of several cities in Scripture, III. 294. APHELIUM, or Aphelion, III. 294, XVII.

412 Aphidii, family of insects, IX, 170

Aphidiphagi, family of insects, IX. 151. APHIOM, Karahissar, III. 294. See Afium. APHIS, plant-louse, III. 294; IX. 171— sucked by ants, III. 263—Bonnet on the propagation of, V. 8-woolly aphis, XI. 716.

APULASTON, III. 204. Aphlochiton, genus of fishes, XII. 248. Aphlodactylus, genus of fishes, XIL 277. APPLOGISTIC, III. 294. Aphodius, genus of insects, IX. 120.

#### APH-APO

APHONIA, III 294 APHORISM, III. 294. APERACTI, III 294. Aphrite, XV 92

Aphritis, genus of fishes, XIL 273. APHRODISIAS, name of several ancient cities, III 294.

Aphrodita, genus of annelides, XI. 299, 291. APHRODITE, III 294.

APHTHARTODOCETÆ, III. 294 APHTHONG, III. 294.

APHTHONIUS, of Antioch, III 294. Aphthous thrush, disease in animals, XXI. 564

APHYLLOUS, leafless plants, III. 294. Apiaceæ, an order of plants, V. 195. APIAN (Peter), III. 294 Apiana, section of insects, IX. 198. APIARY, III. 294; IV. 586 APICIUS, III 296.

APINGADAM, Dutch town, III 296. Apioceras, fossil mollusks, XVII 112 Apiocrinus, fossil echinoderms, XVII 98,

APION, III. 296—genus of insects, IX. 138. Arıs, Egyptian deity, III. 296, XI. 385. genus of insects, IX. 203
Apistes, genus of fishes, XII 281, 283. APIUM, a genus of umbelliferous plants,

III. 297 Apjohn (Dr), cases of human combustion related by, VII. 166 Aploactis, genus of fishes, XII 283.

Aplysia, genus of mollusks, XV. 871,

364 et seq —ova of, 390 Apneusta, order of mollusks, XV 369 Aro, III 297.

APOCALYPSE, III 297. See Revelation, Book of

Apocarpous pistil, in botany, V 180. APOCOPE, III 297.

APOCRISARIUS, IIL 297.

APOCRUSTICS, III 297.
APOCRYPHA, III. 297; XIX 833—of the New Testament, XII 761—controversy respecting its circulation, IV 703, XXI 233—regarded as canonical by papists, XVIII. 337.

Apocryptes, genus of fishes, XIL 306 APOCYNEE, or Apocynacce, nat order of plants, III 298; V. 199.

Apoda, order of zoophytes, XXI. 896. APODECTÆ, III. 298. Apoderus, genus of msects, IX. 138.

Apodes, sub-order of fishes, XII. 268

lemniscati, sub-order of fishes, XII 229.

anguiformes, sub-order of fishes, XII. 231. arthropterygii, sub-order of fishes,

XII 234 APODICTIC, III. 298. APODYTERIA, III. 298.

APOGEE, in astronomy, III. 298: XVII. 413.

Apogenoides, genus of fishes, XII. 288. Apogon, genus of fishes, XII. 275 - of fossil fishes, 343

APOKERUXIS, III. 298 Apolectus, genus of fishes, XII. 297.

Apolemia, genus of zoophytes, XXL 1000, 1006.

APOLLINARIAN GAMES, III. 298 APOLLINARIANS, ancient heretics, III. 298. APOLLINARIS (Sulpicius), III. 299. - SIDONIUS (C Sollius), III. 299

Apollinopolis magna, temple of, III. 458; VIII. 513; XI 382, and n. 2. APOLLO, III. 299, VII. 708—oracles of, XVI. 698—oracle of, at Delphi, VII.

709. VIII. 172; XIX. 369.

APOLLODORUS, Athenian painter, III. 300; XVII. 53. of Carystus, comic poet, III. 300.

tyrant of Cassandria, IIL 300. of Gela, Sicilian poet, III. 800. the Athenian, III. 300.

of Pergamos, III. 300. epigrammatic poet, III. 800. architect, III. 300.

disciple of Socrates, XX. 392, 394.

#### APO-APP

APOLLONIA, city of Illyricum, III. 300. festival, III. 300.

APOLLONICON, III 300; XVI. 713.

APOLLONIUS of Alabanda, III. 300

Dyscolns, III. 300, XVII. 520. of Perga, III. 300; VII 348; X. 501, 503—his profound researches in mathematics, I. 551—on come sections, VII 249, 250-extended notation proposed by, III. 576-his contributions to astronomy, 792-his introduction of the epicycle, I. 598; III. 790—editions of his works, 303—first formed the alliance between geometry and astronomy, 790-Simson's restorations of his works, XX. 300, 301—on the quadrature of the circle, 521.

author of the Argonautics, III. 303: XVIII 103

of Tralles, one of the sculptors of the Farnese bull, III 303. sophist, III. 303

of Tyana, III. 303—life of, by Philostratus, XVII. 543 APOLLOS, III 304

APOLLYON, III 304; II 9 Apologists, in the primitive church, IX. 491.

APOLOGUE, III. 304; IX. 461. APONYOS, heathen gods, III. 804. APONO (Peter d'), III. 304 APOPEMTIC, III. 804 APOPHORETA, III. 304.

APOPHTHEGM, III 304.

Apophyge, in architecture, III. 507. APOPHYLLITE, mineral, III. 304; XV. 76 -optical properties of, XVI. 542, 661,

APOPLEXY, III. 304, XIV. 486; XVII. 700-in horses, XXI. 575. Aporia, in rhetoric, III. 304.

Aporus, genus of insects, IX. 195. APOSIOPESIS, in rhetoric, III. 305. APOSPHRAGISMA, III 305

Apostasiaceæ, nat order of plants, V 211. APOSTASY, III 305.

A POSTERIORI, III. 305, 327.

APOSTLE, III. 305—Acts of the Apostles,
II. 118; XIII. 718—the apostles of Jesus Christ have no successors, I. 501, 487 - spurious acts of the Apostles, II. 118: III. 298 - the question of Peter's supremacy among the apostles, XVIL 481 n., 482-manner in which the apostles speak of Christ, XXL 210. APOSTLES' CREED, III. 305; I. 493.

APOSTOLEIS, III 306. APOSTOLIANS, seet of Mennonites, III.

306. APOSTOLIC, III 306-churches, independent of each other, I. 487.

APOSTOLICAL FATHERS, III. 306tions, VII. 322. succession, how to be understood,

L 503 APOSTOLICI, Or Apostolics, III 306. APOSTOLICUM, III. 306. APOSTROPHE, III. 306; XVIII 685; XIX.

Aposura, section of insects, IX. 214. APOTACTITÆ, III. 306 APOTEICEISMUS, III. 306. APOTHECA, III. 307.

APOTHECARY, III. 306 — Apothecaries' Company, 307; XIV 465—table of apo-thecaries' weight, III. 584; XXI. 808— police of apothecaries' shops, XIV. 441 grains, in different countries, XXI. 807.

Apothecium, in lichens, V. 146. Apothecis, III 307.

APOTHESIS, III 307. APOTOME, III 807. APOTROPÆ III 307. Appa Sahib, XV. 771.

APPALACHIAN MOUNTAINS, III 807; XXI. 420, 421-coal-field of, 420. See Alleghany Mountains.

- branch of American aborigines, II. APPALACHICOLA, river in North America,

TEL 307. APPANAGE, III. 307. See Apanage.

#### APP-APU

APPARATUS, III, 307 APPAREILLE, in fortification, III. 307
APPARENT HEIR, in law, III. 307 APPARITION, CIRCLE OF, in astronomy, III.

APPARITIONS, III. 308 — Shakspeare's ghosts, XX. 88, and n. 1. APPARITOR, III 322

APPEAL, in law, III. 322; VIII. 787, 788

—to God, XIII. 262—in murder, 22 See Parliament, APPELLANT, III. 323.

APPELLATION, JII 323.

APPELLATIVE NAMES, III. 324 - of God, XXL 188. Appendicularia, genus of mollusks, XV.

APPENDINI (Francesco María), III. 324

APPENZELL, Swiss town and canton, III. 324, XX. 882.
Appert (M), his mode of preserving food,

IX. 767.

APPETITE, III 324; XIV 579. APPIA VIA, III. 324; XIX. 228. APPIAN, Roman historian, III 325. APPIANI, two modern Italian painters, III.

APPIUS CLAUDIUS, III. 325; XIX. 300his aqueduct, III. 333.

APPLAUSE, III. 325.
APPLE, III. 325; V 191—section of the fruit, 138—chemical composition of, IX. 759-culture and varieties of, XI 715specific gravity of the wood of the

apple-tree, XII. 89. —— egg, V 201. —— (bitter), V. 193

APPLEBY, in Westmoreland, III. 325; XXI. 843.

Applegath's printing machines, XVIII. 559, 560.

APPLICATION, in geometry, III 325 Appold's centrifugal pump, XII. 76, 180. APPRAISER, III. 325. APPREHENSION, in logic, III. 325; XIII

568; XIX. 114, 115. APPRENTICE, III. 325; XIV. 346-sea-ap-

prentices, 349. APPRENTICESHIP, III. 326-of slaves, XX.

APPROACHES, in fortification, III. 327. See Fortification.

Approbation, love of, XVII. 562, 673.

Approvers, in law, XVIII. 192. APPROXIMATION, III. 327 Appuldurcombe Down, Isle of Wight, XXI.

APPULSE, in astronomy, III, 327: IV. 46. Apricot, culture and varieties of, XI. 711.

APRIES, king of Egypt, III. 327; VIII. APRIL, HI. 327—gardening calendar for, XL 758.

Aprion, genus of fishes, XII. 276, 323 A PRIORI, a philosophical term, III. 327. Apron, in ship-building, IH. 327—in gun-

nery, III. 327. Apsilus, genus of fishes, XII. 276. Apsis, III. 327.

in astronomy, III 327-motion of the Apsides, I. 812; IV. 102; change of the, L 811.

Apsius, genus of fossil fishes, XII. 346. Apsley House, XXI. 829, 940. APT, in France, III. 328 Aptenodytes, genus of birds, XVI. 811. Apteral, in architecture, III. 507. Apterichthys, genus of fishes, XII. 282 APTERYX, a genus of wingless birds, III. 828; XVI 796; XVII 155.

Apthalmichthys, genus of fishes, XII. 232. APTHANE, III. 328.

Aptinus, genus of insects, IX. 81. Aptornis, extinct genus of birds, XVII.

APPLEIUS (Lucius), III. 328; II. 608. APULIA, a subdivision of ancient Italy, III. 828-volcanic formation of, XII. 637.

Apulian system of agriculture, XX. 247. APURE, river, III. 328; XVI. 716. - province, XXI. 537.

#### APU-ARA

APURIMAC, river, III. 328; XVII. 604. APUSCIDAMUS, African lake, III. 328. APYCNI (Soni), III. 328. APYROUS, IIL 328.

AQUA, III. 328-fortis-secunda-Tofana, history of, 1b - marina, or aquamarine, III. 328;

XV. 88

regia, III. 328; VI. 483—specific gravity of, XII. 89.

Aquæ Sextiæ, defeat of the Teutones at, XIX. 319.

AQUAMBOE, African kingdom, III 331. AQUAPENDENTE, III. 331. See Fabricius (Jerome).

AQUAPIM, African kingdom, III. 331 AQUARIANS, III 331.

AQUARII, III 331

Aquarium, invention of, XV. 328. AQUARTUS, zodiacal sign, III. 331; IV 80

Aquatic plants, V. 221 AQUATINTA ENGRAVING, III. 331; VIII.

AQUEDUCT, III 833-Roman, XIX, 359 at Delhi, VII. 706—at Marseille, XIV 317—ruins of, at Jericho, XII. 727—at Lisbon, XIII. 506—at Segovia, XX. 33 Aqueous humour of the eye, in man, III. 44; XVII. 678—in different animals,

- rocks, XV. 139-classification of, 155—petrology, or the character, struc-ture, &c., of, 156—elevation of, 166—as

building stones, XX. 711.

Aquifoliaceze, nat. order of plants, V. 199 Aquina, a constellation, III. 339; IV. 80
— Neapolitan city, III. 339— Roman standard, ib

a native of Pontus, III 339—his Greek version of the Old Testament, IV. 700; XIX. 840

- genus of birds, XVI 742 Aquilariaceæ, nat. order of plants, V. 205. AQUILEIA, ancient Italian city, IIL 339.

AQUINAS (St Thomas), III. 339-doctrines of, L 325 - his comprehensive views, -extensive influence of his ethical system, 328—champion of Augustinian-ism, 325, 434—on charity, 436—on the power of the Pope, 436—on comedy, VTTT 149

Aquino, Italian town, III. 340. - (CARLO D'), Italian writer, III. 340. AQUITANIA, division of Gaul, III 340.

ARABESQUE, III. 840; XI, 68; XVII. 59. ARABIA, III. 341, 734—climate of, 736-7—coffee, VII. 53—modern names of months, VI. 674—expeditions of Mohammad Alee and Ibraheem Pasha against the Wahabees of, VIII. 493, 494-locusts in, IX. 159-horses of, XL 684; III 845, 740—languages of, XIII. 200, 209 — mythology, XV, 764—coins of, XVI 380—mountains of, XVII 597 -deserts, 614-Arabian botanical region, V. 228; XVII. 628-export from Europe of the precious metals to, XVIII. 467-weights and measures of, XXI. -polygamy, XVIII. 266.

Arabians, or Saracens, of the middle ages the first discoverers in Northern Africa, II. 209-invention of algebra claimed by them, 488—their conquest of Algiers, 567—fond of astrology, 598—science cultivated by them, 754-55—anatomy little advanced by them, 755—national character, VIII. 430, n. 4—their duals, VIL 775-their architecture, III. 400; VIII. 499, n. 2-conquests, III. 748their astronomy, 794—refined species of numeration, IL 7—introduction of Arabian numerals into Europe, III. 580 -medicine under, XIV 456, 457, its decline, 456, 457—conquest of Egypt by, VIII. 474—their attention to geography, X 468, to geometry and other sciences, 508; to mathematics, XXI 338—appear to have been acquainted with gunpowder, XI 150—their art, XVII. 60-their knowledge of surgery,

XX 814. See Saracena Arabic alphabet, II. 616—translations of Aristotle, III. 587—versions of the

#### ARA—ARA

Scriptures, IV. 700; XIX. 839-learning, XVII 521-language, 534; XIX. 833 XVII 521—language, 534; XIX. 838—
Mr Carlyle's translation of Arabic
works, VI 242—Casaris' catalogue of
Arabic MSS, 310—Edrisis' Arabic work
on geography, VIII. 411—Pocock's
Arabic versions, XVIII 88.
Arabic, gum, V. 73, 190; XI. 93—spec.
grav of, XII. 89—imports of, into the
United Kingdom, VIII 734, into
Britain, XI. 93—of Kordofan, XIII 131
Arabic, sect, III 366
Arabine, V. 73; IX. 756; XI. 98.
Arabic, III. 366

ARABISM, III. 366.

ARABIST, III 366.

Arabs (Modern), III. 847—in Africa, II. 220—Algiers, 566—Syria, XX. 907— their invasion of, 911—their ballad literature, IV. 396-slave-trade carried

on by, XX. 320 See Bedowns Aracan, III 366. See Arracan. Aracana, genus of fishes, XIL 314. Aracans, birds, XVI 779. Araceæ, nat. order of plants, V 214. Araceis, a genus of plants, III. 366. ARACHNE, III. 366.

ARACHNIDES, III. 367—poisonous species, XIV 441—fossil, XVII. 100, 103. ARACHNOIDES, in anatomy, III 390, 57 Arachnothera, genus of birds, XVL 769 ARACE, III. 390 See Arrack. Aradus, genus of insects, IX. 163 Aræometer, III. 390—barometrical, XII.

Aræopagus See Areopagus. ARZOSTYLE, in architecture, III 392, 507. AREOSYSTYLE, in architecture, III. 392,

Aræotics, in medicine, III 392. Aræoxene, mineial, XV. 106. Arafah, III. 392

ARAFAT, mountain near Mecca, III. 392; XIV. 379.

Arago (Dominique François Jean), I 907, 908-his geodetical observations, ibhis optical labours of most importance ib .- his discovery of the colours of crystallized bodies in polarized light, ib.-on the phenomena of depolarization, ib.-his experiments on rays oppositely polarized, 909—his polariscope, 1b .- on Newton's rings, and the rotatory action of quartz, 910—on the retarda-tions of light in dense media, 1b.—his rotation magnetism explained, 980electro-magnetism, 911, 974, 745, 746, VIII. 532-on meteorology, I. 911character of his Eloges, ib,—article on polarization of light, in this work, written by, ib n. 2—his death, I. 911—on chromatics, VI. 643 et seq—his share in measuring the French arc of meridian, I 837—on Sir Wm. Herschel's discoveries, 846 n. 2—on magnetism, XIV. 10, 15, 29, 30, 31, 53, 55—on micrometers, 744, 745—his micrometer, 752 on optics, XVI 537, 538, 544, 595, 605 et seq., 752-pension obtained for the discoverers of photography by, XVII 545—experiments on the force of steam, XX. 558 - on the power of electrical currents in developing magnetism in iron and steel, XXL 638, 640—his acquaintanceship with Dr Thos. Young,

ARAGON, in Spain, III. 393; XX. 493— Moorish kingdom of, 462—Christian kingdom, 467—canal of, 491—vintage of, XXI. 884.

dynasty of, in the two Sicilies, XX. 259. 268.

ARAGONA, town of Sicily, III. 394. ARAGONITE, mineral, III. 394. See Arra-

ARAHAI, town of Spain, III. 894, ARAI, sea of, III. 894, 738; XVII. 591, 606; XIX. 549.

ARALIACEM, nat. order of plants, III. 894; V. 195.

ARAM, III. 894; XX. 901.

descendants of, VIII. 46. (Eugene), scene of the murder committed by, XIII. 107.

#### ARA-ARC

Aramæan race of man, II. 775. ARAMAIC LANGUAGE, III. 394; XIII. 209; XIX. 833.

Aramus, genus of birds, XVI. 798 ARANDA DE DUERO, Spanish town, III 394 Aranea, genus of Arachnides, III 379. Arancides, family of spiders, III. 373. Arangoes, kind of beads, III. 394. ARANJUEZ, Spanish town, III 394 Aranzi (J. C), his anatomical discoveries, TT. 759

Arapama, genus of fishes, XII, 250, 249. Araponga, birds, XVI. 750 Araqua-Guazi, river, XVII 709 ARARAT, mountain, III 394, ARAS, ancient Araxes, river, III, 395 Aratinga, genus of birds, XVI, 780. ARATUS, of Sicyon, III 395 ---- of Soh, poet, III. 395, Alau, Swiss town, XX. 882 ARAUCANIA, in South America, III 395. Anaucamans, II. 690, VI. 552, 553; IX. 349-their wars with the Spaniards, III.

395—complexion of, VI. 548.

Araucaria, genus of coniferous plants,
III. 396; XVII. 761

Arauco, in Chile, VI. 547. ARAUSIO, III 396.

ARAVULLI, mountains, III. 396. ARBACES, king of Media, III. 396, 778; IV 594; XVII 434

Arbacia, fossil echinoidea, XVII. 100. Arbalest, or Cross-bow, III. 396, V. 251. ARBE, island and city of Illyria, III 396. ARBELA, now Arbil, in Asiatic Turkey, III. 396-battle of, XIII 768; XVII. 434.

ARBERG, a Swiss town, III 396, Arbetio, VII 304

Arbiter, in law, III 396. Arbitrary, III. 396—punishment in law,

ABBITRATION, III. 396-of exchange, IX.

Arblay (Madame d') Sec Burney (Frances) Arbogastes, VII. 310, 311. Arbois, French town, III 397. ARBON, Swiss town, III 397. ARBOR, in mechanics, III 397. - vitæ, XVII 761.

Arbonculture. See Planting.
ARBROATH, III. 397; IX. 783—abbey of, ib.—paving-stone, V. 45 Arburg, Swiss city, III 398.

Arburyhill, station in the Trigonometrical Survey, XXI. 331.

ARBUTHNOT (Alexander), III. 398. (John, MD), III. 398—his share in the work entitled Martinus Scriblerus, I. 242 n., XX. 873-estimate of his talents, I. 285—his errors respecting the value of ancient come, XV. 433 -his epitaph on Col Chartres, IX. 283-Swift's intimacy with, XX. 873.

ARBUTUS, genus of plants, III 399; V. 198; XL 748; XVII 761; XX. 330— A ursa uvi, used for dyeing black, VIII. 305—A. unedo, indigenous to Kerry, XV 687.

ARC, JOAN of, III. 899; XIL 787; X. 23. trisection of an, III. 145.

of meridian, measurement of, IX. 548 et seq -French arc, L 836-English, 837—Indian, 853; IX. 552, 557 n., 558 n —Russian, I. 854—table of arcs of meridian, IX. 562.

of parallel, I. 854; IX. 559, 560.

Arca, genus of mollusks, XV. 347, 349; XVII. 106. Arcadæ, family of mollusks, XV. 349-

fossil, XVII. 106. ARCADE, in architecture, III. 400, 488, 507.

Arcadi, Academy of, II. 70. ARCADIA, III. 400; XI. 12, 19-monarchy of, XV. 412-coins of, XVL 372.

Arcadian alphabet, IL, Pl XIX. Arcadius, Roman emperor, VII. 311. Arcanite, mineral, XV. 99.

ARCESILAUS, III. 400. Arch, III. 400, 507—principle of, known to the Greeks, 440; XX. 710; but its pro-perties unknown, III. 443—invention

#### ARC—ARC

of the, ib -first extensively used by the Romans, 1b.—Gothic, speculation as to its invention, 446—Saxon, 480—Anglo-Norman, ib—pointed, ib et seq. -Lancet, 481-Attwood on the, IV. 234—equilibrium of arches, V. 351 brickwork arches, 733—early Egyptian arches, VIII. 502-centres for, VI 373 et seq -Assyrians well acquainted with the principle of, XVI 277-non arches, XII 587-in the construction of roofs, 589—oblique, XX 314—arch of a circle, X. 513-theory of stone arches, XX. 544-principles of, 719-how to describe, 725-to find the joints of, 728-to find the arch-stones, ib -different kinds of, in mediæval architecture, 733-archjoints, 734-relieving arches, ib. Aqueduct, Bridge, Centic, Skew-bridge. Arch, Triumphal, III 418—Roman, 469, 477-arch of Titus, 487

- an English prefix, III 419. Archæocidaris, fossil echinoidea, XVII 99. ARCHÆOLOGY, III. 419. Archæoniscus, fossils, XVII. 102. Archæus, genus of fossil fishes, XII. 845. Archagathus, his African expedition, VI. 285.

- physician, XIV. 453, XX. 812. ARCHAISM, III 422

ARCHANGEL, III 422

- in Russia, III. 422; XIX 521blockade of the town of, in 1854, 507climate, 519.

ARCHBISHOP, III. 423; IX. 281-succession of archbishops of Canterbury, VI 197
—English archbishops, VIII 743—
French, X. 243, 267

ARCHCHAMBERLAIN, III 423. Archoealor, III 423. Archdeacon, III. 423—court, 424—Eng-

lish archdeacons, VIII. 743. ARCHDUKE, III. 424. Archegonium, in botany, V. 156.

Aichegosaurus, fossil reptile, XVII 183. ARCHELAUS, Greek philosopher, III 424. king of Macedonia, III. 424; XIII.

king of Judea, III 424; XII. 772 Athenian general, III. 424, IV. 172—his engagement with Sylla, III.

Greek sculptor, III 424. 

ARCHENHOLZ (Johann Wilhelm Von), III. Archer (Scott), his improvements in pho-

tography, XVII. 546, 547. - (Henry), his machine for perforating postage stamps, XVIII 415.

Archers, Royal Company of, in Scotland, III 428—body of, established by Henry VII. as yeomen of the guard, VIII. 694. Archers, III 424; XI. 170; XX. 209 practised at Kilwinning, XIII. 88. See Bow.

ARCHES COURT, III. 429: VII. 468. ARCHETYPE, III. 429. ARCHEUS, III. 429.

Archiacia, fossil echinoidea, XVII. 100. ARCHIACOLYTHUS, III. 429. See Acolyte. ARCHIATER, III. 429; XIV. 422. Archidamus, IV. 204.

ARCHIDAPIVER, III 429. ARCHIDONA, Spanish city, III. 429. Archiepiscopal orders of knighthood, XIII. 123

ARCHIGALLUS, III. 429. Archigenes, Roman surgeon, XX. 813. ARCHIGERONTES, III, 429.

ARCHIL, lichen for dyeing purple, III.
429; V. 217; VIII 285; XIII. 515—
discovery of, VIII. 273.
Archilochian vorse, III. 429.

ARCHILOCHUS, Greek poet, III. 429.

ARCHIMAGUS, III. 429. ARCHIMANDRITE, III. 429.

Archimedes, III. 429; X. 500—his contributions to mathematics, I. 551, 553discoveries in physics, 566—the first who applied mathematics to natural

philosophy, 567-his discoveries in hy-

#### ARC—ARD

drostatics, 596, XII 69-extended notation proposed by, III 576-his planetarium, 790—his burning glasses, VI 3, 7; I 622—on conic sections, VII. 249, 250-his screw-engine, XII 69, 181-his proposition on floating bodies, 83-anecdote of, 85, XX. 130-Moor's edition of his Arenarius, XV 526-on the quadrature of the circle, XX, 521, his machines for defending Syra cuse, 900-death of, 1b

ARCHIMEDES-SCREW PROPELLER, III 430 See Steam Navigation

Archimedipora, fossil animals, XVII 98,

ARCHIMIMUS, III, 430. ARCHINUS of Coele, IIL 431. ARCHIPELAGO, III. 431-the Dangerous Archipelago, XVIII 282.

ARCHISYNAGOGUS, III 431. ARCHITECT, III, 431-skilful architects of

the middle ages, 402
Architecture, III 432—French Academy of, II 69—Mexican, 683—Peruvian, 685, 688—Chinese, 688; VI 582— Egyptian, III 457, VIII 442—Nubian, XVI 349—Hindu, III 459, XI 477— Grecian, III. 440, 460-Roman, 443, 469 —Italian, 449, 477—Gothic or Pointed, 445, 479—principles of architectural 249, 245—principles of architectural composition, 485—glossary of terms, 507—Assyrian, III 499 et seq; XVI, 276—of Pompeil, XVIII 288—Spain, XX, 494—America, XXI 424—Alson on the beauty of Grecian, IV 549— Coulomb's statical problems relating to, VII. 461-improved by the Crusades 534-its position among the arts, XIV 337—Lombard style, XIII 643—garden architecture, XI. 754-in the reign of Queen Ehzabeth, &c., XXI 934 See Arch, Building, Carpentry, Chimney, Dome, Free Masonry, Roof, Stone Masonry, &c.

\_\_\_\_\_ (Naval). See Ship-building. Architrave, III 507—Donc, 464, 476-Ionic, 465, 475-Corinthian, 467, 474-Caryatic, 467-in joinery, V. 752, XII. 812

ARCHIVE, or Archives, III. 517. ARCHIVIST, III. 517. Archivolt, in architecture, III. 507. Archiute, or Arciliuto, III. 517. Archon, III 517, IV. 193, 213—in Gnosticism, X. 687

ARCHPRIEST, or archpresbyter, III. 518. ARCHYTAS of Tarentum, III 518, 552; X. 498, XVII. 787—his artificial flying dove, II. 166, IV 320. Arcis, battle of, X. 168

ARCIS-SUR-AUBE, in France, III. 518.

Anco, town in the Tyrol, III. 518. ARCOLE, village in Austran Italy, III. 518-battle of, 1b; X. 103; XV 789.

ARCON (J. C. E. Le Michaud d'), French engineer, III 518—his floating batteries, X 618 Arcopagus, genus of insects, IX. 153.

ARCOS DE LA FRONTERA, Spanish town TTT. 519.

ARCOT, city of Hindustan, III, 519. - nabob of, payment of his debts, V. 514—Burke's speech on that subject, 777. Arcric, III. 519—circle, ib.—pole, X. 481—ocean, XVII. 576; depth of, XVII.

575. REGIONS, III. 519. See Polar Regions.

- region of vegetation, V. 231 Arctomys, genus of mammalia, XIV. 179. ARCTURUS, a fixed star, III. 519. Arcusta, family of crustacea, VIL 541. Arcueil, aqueduct of, III, 386.

ARCY (Grotte d'), a stalactitic cavern, III.

- (Patrick D'), III. 519-on overshot wheels, XII, 168, Ard (Loch), trout of, III, 158, n. ARDEA, or Ardua, ancient city of Latium, III. 519.

genus of birds, III. 519; XVI. 798.
Andreal, or Ardebeel, Persian town, III.

#### ARD—ARG

ARDECHE, in France, III 519 ARDEE, town in Ireland, III 519. ARDELAN, province of Persia, III 520 ARDELL (James Mac), engraver, III. 520. ARDEN, III 520 ARDENNE, forest of, III 520, IV. 610.

ARDENNES, III 520 Ardent spirits See Alcohol, Distillation,

Brandy, &c Ardern (John of), surgeon, XX. 817 ARDES, French town, III. 520 ARDFERT, Insh town, III. 520, XIII 72 ARDGLASS, Irish seaport, 520, VIII 122 ARDISHEER, III 520. See Persia Ardmore, in Waterford, XXI 769-pillartower at, 771.

Ardnurchur, castle of, XXL 841. ARDOCH, in Perthshire, III 520 ARDOYE, town in Belgium, IIL 520. ARDRAH, in Africa, III. 520. ARDRES, French town, III 520.

Ardrossan, in Ayıshire, III. 520—hai-boui of, IV. 333—railway, ib.—canal, XIII 176

ARDSISCH, in Wallachia, III. 520 ARE, French superficial measure, III 520; X 284

Area, III 520—in architecture, ib—in geometry, 521; X. 520—areas of the come sections, VII. 289 See Mensuration

AREBO, African town, III 521. Areca, a genus of palms, III 521, V. 214; VI. 394—fruit used in making betel, IV 685

Areiopagus See Areopagus, Aremberg, Prussian town, III. 521. Arena, III 521

Arenaceous plants, V. 221. AREMARIA, genus of birds, III. 521; XVL 804—of plants, III 521.

ARENARII, III. 521 ARENARIUM, III 521 ARENDAL, Norwegian town, III, 521. ARENDT (Martin Frederic), III 521 ARENG, a genus of palms, III 521. Arenicola, genus of annelides, XI. 296.

Arenicoli, section of insects, IX. 120 Arenoid barometer, IV 459. ARENSBERG, city of Westphalia, III 521. ARENSBURG, seaport of European Russia, III. 521.

Areoda, genus of insects, IX. 125. Areola, III 521. Areometer, barometrical, XII. 87.

AREOPAGUS, III. 521; IV. 169, 215; XL 19 AREQUIPA, in Peru, III. 521; XVII. 469,

- volcanic mountain, IV. 822—height of, XVII. 645

Ares, Greek deity, III 522 ARETEUS of Cappadocia, III. 522; II 688; XX 812, 813—on insanity, XIV. 527.

ARETALOGI, III. 522. ARETHUSA, III 522, XI. 361. ARETINO (Guido), musician, III 522 (LEONARDO and FRANCESCO), III.

(PIETRO), III. 523—anecdote of Tintoletto and, XXI. 284 AREZZO, Tuscan city, III. 523. - prefettma of, XXL 395.

ARFE (Henrique and Juan de), III, 524. Arfvedsonite, mineral, XV. 81. Argali, in zoology, XIV. 212, 213, ARGAND (Aimé), III. 524.

- gas-burners, X. 425—their orifices. lamp, XIII. 170-used in reflectors

469. Argas, genus of arachnides, III. 888. ARGAUM, in Hyderabad, III, 524. ARGEL III 524.

Argelander (Prof.), on the solar motion, IV. 87; I, 846—his catalogue of stars, IV. 95—in the magnitude of the stars,

ARGELES, in France, III. 524. ARGENSOLA (Bartolome Leonard de), III. 524.

ARGENT, III. 524-in heraldry, XI. 824. ABGENTAC, French town, III. 524.

#### ARG—ARI

ARGENTAN, in France, III. 524. Argentario, mountain, XXI. 393. ARGENTARIUS, III 524 ARGENTEUIL French town, III, 524. Argenteus, Roman com, XVI. 383. ARGENTIERE, Island, III 524 Argentina, genus of fishes, XII 245. Argentine Confederation, IIL 524 See La Plata.

ARGENTINUS, Roman deity, III. 524. Argentite, XV. 117. ARGENTUM Album, III. 524. – Dei, III. 524 Arges, genus of fishes, XII 262, 260.

Argillaceous 10cks, XVII. 620 ARGO, IIL 524, ARGOBAST (Louis François Antoine), III. 524

Argobastes, VII 311 ARGOL, or Argal, III 524. Argolis, in Greece, XL 12, 19-coins of, XVI 372.

Algonauta, genus of mollusks, XV. 401, 395

ARGONAUTS, III, 524

- OF ST NICHOLAS, military order, TTT 595 — Academy of, II. 62

ARGONNE, in France, III 525. Argos, III. 525; XI. 12—monarchy of, XV 412.

- AMPHILOCRICUM, III. 525. ARGOSTOLI, town in Cephalonia, III. 525, XIL 453

Argovia, a Swiss canton, IL 3. See Aragau.

ARGUIN, African island, III 525. Argumentation, process of, XIX. 119, 120. Arguments, in thetoric-classification of, XIX. 121—application of, 125—from condition, 122—symptom, 123—resemblance, 124

ARGUMENTUM AD HOMINEM, III. 525 ARGUN, river, IIL 525 Argunskoi, town in Siberia, III. 525 ARGUS, III 525-shell, 525 - genus of buds, XVI. 790.

ARGUTIÆ, III 525. Augyle (earls, marquises, and dukes of). III. 527. See Campbell.

In Australia, IV. 278, 282.

ARGYLESHIRE, III. 525—fisheries of, IX. 635, 636 — vitrified forts of, 792 agricultural statistics, XIX. 796, 797, 798-population, 799.

Argynnis, genus of insects, IX. 207. ARGYRASPIDES, III, 527. Argyreiosus, genus of fishes, XII. 297. ARGYRO-CASTRO, town in Albania, III.

527. Argyroneta, genus of arachnides, III.

Argyropelecus, genus of fishes, XIL 248 ARGYROPULUS (Joannes), III. 527.

ARIADNÆA, Greek festivals, III. 527. ARIADNE, daughter of Minos, III. 527. Arian languages, XVII. 529—branches of, 530-philology of, 531-extensions of, 533

ARIANO, Neapolitan city, III. 528 ARIANS, III. 528, 608; VIII. 473; XII. 764, XXI. 208—opposed by St Ambiose, II. 663 — Milton's adoption of their views, XV. 34-Whitaker's work on Amanism, XXI. 851. See Arius. Arrarthes, VI 222.

ARIAS-MONTANUS, Spanish divine, III. 528. ARICA, town and district in Peru, III. 528. Aricia, genus of annelides, XI. 299. ARICINA, surname of Diana, III. 528, Arideus, XIII, 773. ARIEGE, in France, III. 528.

ARIENZO, city of Naples, III 528. ARIES, zodiacal sign, III. 528. ----- See Battering-ram.
Arietes, Ammonites, XVII. 113

Aril, or Arillus, in botany, V. 140. Arillode, in botany, V. 140. ARIMANES, III. 528. Arimaspi, IIL 528. Arimmum, XIX. 173.

Amobarzanes, VI. 222; XVIII. 292. Ariodes, genus of fishes, XIL 262.

#### ARI—ARI

ARIOLI, III 528.

ARION, Lesbian poet, III. 528-fabulous horse, 529.

norse, 525.

— genus of mollusks, XV. 374.

Arrosro (Lodovico), III. 529 — Galileo's admiration of, X. 381 — his poetry, XVIII. 95, 110—Hoole's translation of his Orlando Furroso, XI, 622 Arnovistus, X. 574.

ARISTÆUS, son of Apollo, III. 530 - geometer, X. 499.

Aristagoras, his map, X. 466.

the Milesian, IV. 198.

ARISTANDER, soothsayer, III. 530. Aristarchus, of Samos, III. 530 — his astronomy, 790 — of Samothrace, III 530.

Aristeas's account of the Pentateuch, IV 699.

ARISTIDES the Just, III. 530; IV. 199.

(P. ÆLIUS), Greek rhetorician, III. 531

(QUINTILIANUS), III. 531 Greek painter, III. 531; XVII. 54,

57. Aristillus, astronomer, L 598; III. 790;

X. 465. ARISTIPPUS, founder of the Cyrenauc sect of philosophers, III 531, 551, note 9; L 316, VII 610; XVIL 789

Aristo of Chios, Stoic philosopher, III.

ARISTOBULUS of Cassandria, III. 532 - Alexandrian Jew, III. 532notice of the Septuagint, IV 698.

XII. 770; XVII. 194

ARISTOCRACY, III. 532; X. 734-in Attica, IV. 193.

Aristodicus of Cyme, XX. 391. Aristogiton, III. 532, XI. 229; III. 532; IV 197.

ARISTOLOCHIEÆ, Or Aristolochiaceæ, nat. order of plants, III. 582, V. 205. Aristomenes, XX. 499.

Arıstonicus, XVII. 411.

ARISTOPHANES, III. 532 — his comedies. VIII. 139—his enmity to Euripides, IX. 378-instructed the people under the mask of folly, XVIL 795 - his comedy of The Clouds, XX. 383-his ridicule and misrepresentation of Socrates, ib. 384, 385. - of Byzantium, III 532.

ARISTOTLE, III. 533—his writings, 536, 570—character of his philosophy, 538 - causes which operated in undermining the authority of, L 16-by whom his authority was endangered, 25—on rhetoric, 54; III 556, XIX. 119 et seq.—his comparison of the mind to a sheet of unwritten paper, I. 330resemblance of Hume's principles of association to the views of, 448-his definition of motion, 566; of light, 621; and heat, 756-his disbelief in a future state, 462—his physical tenets, III. 541; IV. 448—his system of logic may be derived from India, V. 271—high estimation of his works in the middle ages, VII. 585—on dew, 765—on the dramatic unities, VIII. 152—on specu-lative philosophy, XIV 551—on dreams, VIII 176-his supposed opinion on universals, XVI 284—Reid's account of his logic, XIX. 2—founder of com-parative anatomy, II.750—extent of his anatomical knowledge, ib .- his influence on the advancement of medi-cine, XIV. 452-philology advanced by, XVII. 518-refutation of his logic by Ramus, XVIII 805—his History of animals, IL 750; III 548, 549; XIL 204; XIV. 122-on the soul, III. 548on mathematics, 541—on metaphysics, 541; XIV. 558—on perception, III. 549 -his astronomy, 545, 789-his use of —his astronomy, 540, 789—his use on the term Reminiscence, XIV. 576 and n. 10—his Analytics, III. 553—on fishes, XII. 259, 274 et seg.—on birds, XVI. 725-his Dialectic, III. 550-his Poetics, 725—his Bihics, 560—his Politics, 566—design of his philosophy, 570—style of his writings, ib.—his obscurity, 571—

#### ARI—ARM

his method of discussion, ib -his originality, 1b. - how far indebted to Plato, ib.-his esoteric and exoteric works, IX. 332 — on fallacies, 476 on speech, XIII. 185 - his library, on light, 449—on optics, XVI 521 on the distinction between making and doing, XV. 535-on moral philoso phy, 536, 538, 541, 558, 560-his ethical works, 539—on the air, XVIII 24—on man as a member of society, XV 569on falconry, XX. 209-on the silk-worm, 286-Simplicius' commentaries on, 298-Socrates a precursor of, 402-influence of his doctrines on medicine, 811-says little about the tides, XXI 250-his opinions on natural theology, 181

ARISTOTLE'S PHILOSOPHY, III. 536 — Luther's contempt for, I. 16—Melancthon's approbation of, ib See Aristotle, Ethics, and Ethical Philosophy.

Aristoxenus, III. 572

Arithmetic, III. 572—history of, ib—

early systems of notation, L 702-discovery of the denary system generally referred to India, 703-advantages and gradual extension of this system, ib decimal fractions first introduced by Stevinus, 1b. - notation of decimals brought to its utmost simplicity by Napier, ib -advantages and disadvantages of the duodenary scale, ib -perfect, prime, and composite numbers, 704 - magic squares, 1b - continued fractions much cultivated during the eighteenth century, 705, and brought to perfection by Euler, ib—applications of the theory by him, ib—applied to the solution of numerical equations by Legrange, 706-tables of the powers and products of numbers by Hervart, 1b —of the Greeks, Romans, and Arabians, II. 5, 6, 7—abundant number in, 54-proportion in, 500-of sines, 547alligation or solution of questions relating to the mixture of ingredients, 592 -binary, IV. 724; L 703 - Chinese knowledge of, VI 555—Druidical know-ledge of, VIII 187—necessary truths of, XIV. 597, 598—one of the branches of pure mathematics, 353 - Napier's rods, XV. 777—Pestalozzi's mode of teaching, XVII. 479—Playfair on the arithmetic of impossible quantities, XVIII. 4—anthmetical board for the blind, IV. 777—arithmetical progression, XVIII. 639. See Number, Series, Addition, &c.

ARIUS, III. 607; IX. 404-his songs, XII.

genus of fishes, XII. 262.

ARK (Noah's), III. 608; VII. 713; XX. 117. of the Covenant, III. 608 - in synagogues, XX. 898

ARKANSAS, North American state, XII. 608; XXI. 419—debt of, 428—produc-tion of wine in, 888.

- river, III. 609; XVII 605, 646 Arkites, XX. 904.

ARKLOW, Irish town, III. 609. ARKWRIGHT (Sir Richard), III. 609; VII 442; V 508-his spinning-frame, VII 442; and other machines in cotton manufacture invented by, 443, 444; XIV. 251; XX. 510—importance of his inventions, V. 508

ARLAND (Jacques Antoine), III. 612. ARLES, in France, III 612.

- earnest money, III. 524, 678. Arm, human, muscles of, III. 38-tions of the, 40.

ARMADA (Spanish), III. 618; VIII. 712; XVII. 511; XX. 469—English force opposed to, 127—partly wrecked on the coast of Ireland, XII. 478—articles brought up by a diver from sunk ships of the, VIII. 60.

ARMADILLO, quadruped, III. 613; XIV.
191—fossil, XVII. 174—teeth of, XVI. 440, 441,

ARMAGEDDON, III. 618.
ARMAGE, III. 618—battle of, XII. 478agricultural statistics of, 516, 517

#### ARM—ARM

ARMAGNAC, in France, III. 615. - counts of, X. 22, 27

Armament of fortresses, IX. 822 — of ships of war, XVI 93, 94, 98. Arman (L), his system of framing for ships, XX 204.

Armançon, river, XXI. 954.

ARMATURA, III. 615.

Armature of loadstones, XIV. 20 - of electrical machines, XXI. 647. Arm-bone, III 31.

Armed Neutrality of 1780, V. 494; VII.

ARMENIA, III 615; XXI 377-conquered by Alp Arslan, II. 604—monarchy of, XV. 412—plateau of, III 733, XVII.

ARMENIAN LANGUAGE, III 616; IX. 390; XIII. 216; XVII 530—alphabet, II 615; III 617—works in that language, TT 615

Armenian monks, on an island near Venice, XXI 539

- VERSION, III. 617; IV. 701; XIX. 839.

Armenians, in ethnology, IX. 346. - m Jerusalem, XIL 747-m Calcutta, VI. 70-in Turkey, XXI. 378era of the, VI. 678—months, ib

Armenio-Gregorian church, in Russia, XIX. 528

Armenius, X. 575 Armens-grube, silver mine, XV 236 Arment, Egyptian village, VIII 513 ARMENTIERES, French town, III 617 ARMIGER, title, III. 617; IX. 383

Armil, or ring, problem of, I 949, n.
Armillary Sphere, IIL 617; X. 486 supposed to have been invented by

Eratosthenes, III 790
ARMINIANS, III. 617; IX. 394 — Grotius one of, XI 69 — Dutch, 572 — deny predestination, XVIII 478—school of, XXI. 183-their hypothesis as to the effects of Adam's sin, 204-Arminian Baptists, IV. 427.

RMINIUS, German chief, III. 617: X.

(JACOBUS), III 617, XL 572— theology, XXI. 183, 204 et seq. ARMISTICE, III. 618.

ARMLET, III 618. ARMORIC, III 618 ARMORY, III. 618.

ARMOUR, III. 618-Roman, 632-of the British Life-Guards, 665—of knights, VI. 616, 624—for divers, VIII. 57. Arms, military weapons, III 618. See

Army, War.

in heraldry, III. 618—of states, XI. 322-royal arms of England, Scotland, and Ireland, 322, 323-marshalling, 339 -coats of arms, why so called, XL 321 -of courtesy, VI. 610—places of arms, TX. 819.

kings of, XI. 320.

office of, for Ireland, XI. 321. ARMSTRONG (John), M.D., physician and poet, III. 618—his sarcasm on Burman, V. 789—poetry of, XVIII. 124. — (JOEN), M.D., physician, III. 618. — (Robert), his furnace for the pre-

vention of smoke, XX. 355.

- and Bowman's upright steamboiler, XX. 617.

gun, XXL 727. Armstrong's hydro-electric machine, VIII. 534, 605—Faraday's explanation

ARMUYDEN, town in Walcheren, III. 618 ARMY, III. 619-Achean, 628-American, 661-Athenian, 625-Austrian, 644; IV. 317 - of Baden, 652 - Bavarian, ib.; IV 519-Belgian, III. 653-Brazilian, 662; V. 297—British, III. 662, VIII 750
—of Bombay, V. 2—Carthagenian, III.
629—of Chile, VI. 547—Chinese, 583— Danish, III 650; VIL 749-Dutch, III. 654; XL 585—Egyptian, ancient and modern, III. 620; VIII. 515—French, III. 638; X. 270—of the Germanic confederation, III. 652-Greek, ancient and modern, 624, 661; XI. 20-of Haytı, III. 661

#### ARN-ARO

-Hanovenan, 652-Hungarian, XII 16 —Indian, XI 530—Japanese, XII. 692— Macedonian, III. 626—of the middle ages, 635—Norway, XVI 329—Neapo-litan, III 655, XX. 253—of the Netherlands, III. 653; XI. 586-Nova Scotia, \*XVI 345 - Ottoman, III. 656 - ancient Persian, 622; modern, XVII 428 -Prussian, III. 646; XVIII 671-Portuguese, III 643, XVIII 396—Papal States, XVII. 245—Roman, III 629— Russian, 647, XIX. 532—Sardinian, III. 655, XIX 638-Saxon, III 651-Spanish, 643, XX 492 — Spartan, III 625 — Swedish, 650, XX 866—Swiss, III 655; XX. 891—Theban, III. 628—Turkish, 658, XXI 382—of United States, III 661; XXI 430-of Wurtemberg, TTT. 652; XXI 939-proportions of artillery acting with, III. 689 - continental armies in the eleventh century, VIII. 667 n.-discussions i especting a standing army, V. 535-Mr Windham's act for the improvement of, 599-Lord Howick's bill for religious emancipation in, 600-militia act, 605-principles for regulating an invading army, XIII 287, 289—disregard of sanitary arrangements in the British, XIX. 606--promotion in, VII. 202-commissions in, ib rates of pay, 1b, 203—organization of, XXI 715 See War.

ARNALL (William), III. 668 ARNAUD de Meyrveilh, poet, III. 668 - (DANIEL), troubadour, III 668. DE ROUSIL (George), surgeon, III.

de Villa Nova, physician, III 668 · (Thomas Joseph), his visit to the ruins of Saba, III. 356

- (St), marshal, French commander in the Crimea, XIX. 501, 504, XXI. 375 ARNAULD (Antoine), III 668; XVIII. 377 -his book on true and false ideas, in opposition to the Ideal theory, I 80summary of his doctrines concerning ideas, ib. note 2-merits of his treatise on The Art of Thinking, ib., the real author of that work, XVI. 253 n. 1 anecdotes of, I. 81-on Euclid's Elements, IX. 365

ARNAY-LE-DUC, French town, III 669 Arnberg (J. A.), his work on insects, IX.

ARNOT (John), III 669 ARNE (Thomas Augustine), III. 669. Arnee, in zoology, XIV 216 Arnheim, Dutch town, III. 670 Arnheim land, in Northern Australia, IV. 270.

ARNICA, genus of plants, III 670. Arnim (Achim von), his novels, XIX. 292. ARNISÆUS (Henningus), III 670. ARNO, Italian river, III. 670; XII. 687; XXI, 393.

ARNOBIUS, III 670.

ARNOLD of Brescia, III 670; XIL 645. (BENEDICT), American officer, III.

(SAMUEL), musician, III. 671 (STRUTTHAN VON WINCKELRIED), TTL 671.

- (THOMAS), D.D., III. 671-on history, XI. 586—on Niebuhr's interpreta-tion of the Agrarian laws, II. 246—on the laws of the twelve tables, XIX. 301 on the history of Rome, 303, 304.

Arnold's illustration of the nerves. II. 815, n. 1.

ARNOLDUS (Gothofredus), III. 673. Amolpho, III. 450 Arnon, river, XVII 188. Arnott (Dr), his stove, XX. 353, 741. Arnotto, order of plants, V 183. Arnsberg, in Westphalia, XXI. 844. ARNSTADT, in Germany, III. 673 ARNULPH, bishop of Rochester, III. 673. ARNWAY (John), D D., III. 673 AROER, four towns in Scripture so nam III. 673.

Aroens, Egyptian desty, VIII. 488. AROIDEZ, order of plants, III. 673.

#### ARO—ARS

Arona, Italian town, III. 673. Aroo, islands, III. 673 Aroph, III 673-Paracelsi, ib Arpad dynasty, in Hungary, XII 11. Arphaxad, and descendants, VIII 46 ARPINAS (Giuseppe Cesare), painter, III.

ARPINO, town of Naples, III. 674 Arqua, Italian town, III 674—Petrarch's residence at, XVII 499. ARQUES, in France, III. 674 ARRACAN, III. 674, IV 651-war in 1825, V 646.

ARRACK, III 675; VI. 394; VIII. 47, XX. 798

ARRAGON, III 674 See Aragon. Arragona (L), his works on insects, IX.

Arragonite, XV. 92-refraction of, XVI

ARRAIGNMENT, IN law, III. 675 

676, VIII 105 (Earl of), XIX 776.

(Earl of), under James VI., XIX 788

Arras, city in France, III. 676; XVII 332tapestries of, XXI. 20 ARRASWISE, in heraldry, III. 676. ARRAY, in law, III. 676. ARRAYERS, III 676 Arreboe (A. Christensen), XIX. 692.

ARRENTATION, III. 676 ARREOYS, III. 676.
ARREST, III 677—of judgment, 1b.

ARRESTMENT, in Scottish Law, III. 678. Arretium, III. 528; IX. 358, 359. ARRHÆ, III 678, 524. Arrhenius (J. E.), his work on insects, IX

ARRIA, wife of Cæcina Pætus, III. 678. ARRIAN, Roman historian, III. 678-his account of Beloochistan, IV. 639.

- bud, XVI. 738 ARRIAZA (Juan Bautista), III. 678. ARRIEGE, III. 678. See Arrege. Arrindy silk-worm, IX. 212; XX. 288,

Annis, III 678, 507

fillet, or Tilting-fillet, III. 678.
ARROE, Island, III. 678.

Arrow, III. 678, see Aichery—makers, ib.
grass, order of plants, V. 214.

(Lough), XX 329.

Roor, III. 678; V. 211—of the Bermudas, IV. 668—adulterations of, IX. 769

Arrow-headed writing. See Cunesform inscriptions ARROWSMITH (Asron), III. 679.

ARSACES VI., otherwise Mithridates, III. 679.

kings of Parthia, XVII 310, 485. Arsacidæ, Persian dynasty, XVII. 435. Arsberger (Prof.), on the force of steam, XX. 557.

ARSENAL, III. 679-of Venice, XXI 538 -Toulon, 317-naval, see Dockyardsmilitary, see Woolwich.

- library of the, XIII. 408. ARSENIC, III. 679; VI 494, XV. 65; XVII. 628—native, XV. 114—mines of, XV. 246-its allies with antimony, VI. 494-its action as a poison, XVIII 128, 129, 132, 133-antidotes to, 134-poisoning with, XIV. 432—means of detec-tion, 433—in mineral waters, XV. 38 administration of, to horses, XXL 567 -used for poisoning rats, 548.

- acid, VI. 495; XV. 61. - antimony, XV. 114—silver, ib.—

glance, ib. Arsenical pyrites, XV. 115. Arseniosiderite, mineral, XV. 102. Arsenious acid, VI. 495; XV. 61. Aisenite, mineral, XV. 113. Arsenites of copper, VIII. 319. Arseniuret of manganese, XV. 117; of cobalt, VI. 492.

Arsenius, III. 679.

ARSENOE, mother of Ptolemy L, III. 679 -name of various cities, ib.

#### ARS—ART

Arsenoe, XI. 391. Arson, III. 679; XIV 427. Arsoor, battle of, VIII. 481. ARSURA, III. 679.

Art, distinguished from science, XIX. 734.

Art-treasure Exhibition at Manchester, XIV. 256-Art Institution in London, XIII 675

ART and PART, in Scottish law, III 679 ARTA, town in Albania, III. 679; II. 661. gulf of, III. 680

ARTABA, ancient measure, III 680.

Artabanus, XVII. 310, 313. ARTABAZUS, III. 680

ARTAXERXES, name of several Persian kings, III. 680; VIII 465—founder of the dynasty of the Sassanidæ, XVII. 435-revolt against the Parthians, 313. - Longimanus, VIII. 466; XVII.

- Mnemon, XVII 434 - Ochus, his subjugation of Egypt,

VIII. 467 Artaxias, III 615

ARTEDI (Peter), naturalist, III 680—on fishes, XII. 205, 206—his intimacy with Linnœus, XIII 498

Artemia salina, VII. 543-A. Oudneyi, IX. 532.

ARTEMEDORUS of Ephesus, III 680; X.

ARTEMIS, III 680, IX. 268

- genus of mollusks, XV 350-fossil, XVII 108.

ARTEMISIA, queen of Caria, III 680.
——wife of Mausolus, III. 680—monument erected by, to her husband, XIX.

- a genus of plants, III 680; V. 197. ARTEMISIUM, promontory, III 680 ARTEMON, ancient painter, III 680.

- heretic, III. 680.

Arteries, their structure, II. 789; III. 65; XVII. 653—functions, 661—anatomical connections of the arterial system, II 791-modes in which they terminate 792, 797—generally accompanied by veins, 795, 796; but not always, 796 manner in which they pass into capillary vessels, 798—helicine arteries, 801 -early opinions respecting them, 750 et seq-comparative anatomy of, III 112-aneurism of, XX. 828, 829

ARTESIAN WELLS, III 681-natural siphons, XII 82

ARTEVELDE (James Van) III. 681; X. 16,

ARTHRITIC, III. 682.

Arthropotama, order of mollusks, XV. 336.

Arthropterus, genus of fossil fishes, XIL

ARTHUR, hero of the Britons, III. 682; XIX. 743—Arthur's round table, III 682—Arthur's Knights of the Round Table, VI. 622; XIII. 111—Arthur's oven, VI. 276—Arthur's Scat, III. 682; basalt of, XV 190—Arthur's Scat, in Nova Scotia, XVI 343.

governor of Tasmania, Aborigines of that country, XXI. 31.

Articerus, genus of insects, IX. 153 Artichoke, V. 197—culture of, XI 743 Jerusalem artichoke, IL 321, IX. 760;

ARTECLE, in grammar, III. 682, X. 749, 791 —in Egyptian language, XI. 422, 426. Articles of Faith, I. 541—thirty-nine ar-

ticles, VII. 486. - of war, XVI 107.

ARTICULATA, III. 682; II. 772; IX. 25, XV. 322—their organs of smell, III 94 of vision, 98 nervous system, 105their structure, 185-Cuvier's division of, 192-characters of, 183, 192-fossil, XVII 100, 640—number known, 631. Articulation of bones, IL 880—of the

spine, III. 8—shoulder, elbow, wrist, and fingers, III. 34—hip, 36—knee, 37 ankle, ib.—in the mammalia, XIV.

ARTIFICER, III 682.

### ART-ASA

ARTIFICIAL HORIZON, III. 682.

- manures, II 305 ARTILLERY, III 683 - meaning of the word, 424 — field, 688 — siege, 691 garrison, 693-for coast defences, 695 garrison, 656—107 coast detences, 655
—exercise of, 696—park, 704—train,
705—Austrain, 645—French, 641—
Spanish, 648—British, 665—Belgian,
654—Prussian, 646—Russian, 649— Turkish, 658-different kinds formerly in use, XL 136-different kinds of fire of, 141-marine, pay of, XVI 113. See Cannon, Gunnery, War. ARTIST, III 705

ARTOCARPIÆ, or Artocarpaceæ, nat. order of plants, III. 705; V 206

Artocarpus incisa See Bread-fruit. Artois, French province, III 705; X.

- (Count d'), X. 15 et seq ARTOTYRITES, early religious sect, III 705 ARTS (useful), III. 705-original invention of, I 453-boundaries of art and science undefined, 805-their connection with physical science, 807-limits of art, 808 -application of electricity to the, I. 984; XXI 638-multiplying works of art by, 1b -in Peru, IL 685-Egypt, VIII. 443, 447.

- (fine), III 707—Grecian and Italian works in, 709—French and Spanish, 712—their progress in Britain, 1b schools for promoting the, 718-Corinth, the seat of, VII. 368—academies of the, II. 67—exhibitions of works in the, IX. 453-among the Etruscans, 359-institutions of, in London, XIII. 675-80cieties for, in New York, XVL 230illustrations of, from numismatics, 351. 352, 856, 357, 382, 387-their importance in history, XI. 588-in Holland, 591-Portugal, XVIII. 399-how regarded by Quakers, 722-organization of art, XIX. 107-relation between arts and their theories, 109-data for theories of, 110 -in Russia, 530. See Painting, Sculp-

degrees in, III. 720. See Universitics unions, XIII 697.

Artza, VII 314. Arueris, Egyptian Apollo, XI 383. Arum maculatum, plant, V. 214—evolution of heat by, 149 Arun, river in Sussex, XX. 889. ARUNDEL, town in Sussex. III. 720. - (THOMAS), archbishop, III. 720. ARUNDELIAN, or Oxford Marbles, III. 720 -Selden's work on, XX. 37

ARUSPICES, or Haruspices, III. 720; XI. ARVA, in Hungary, III 720

ARVALES FRATRES, III. 720; II 652; XIV. 305. ARVE, Swiss river, III. 721; XX. 888

Arvicola, genus of mammalia, XIV 183teeth of, XVI. 454. Arvidsson (A. Iwar), Swedish poet, XIX.

700 Arvieux (M. d'), on Arabian horses, III.

846 ARVIL SUPPER, III. 721. ARVIRAGUS, British king, III. 721.

ARX, III 721. Arya-Bhatta, Hindoo algebraist, IL 487 Aryiodactyla, group of mammals, XVII 165.

Arymbas, L and II, kings of Epirus, IX.

Arytenoid cartilages, III. 50 Arzachel, astronomer, III 795. Arzew, seaport of Algiers, III 721. ARZILLA, town of Morocco, III. 721. As, an ancient weight, III. 721—Roman coin, ib. VII. 67; XVI 360, 383, 384;

XV. 432. Asaffi, town in Morocco, XIX. 570. ASAHEL, III. 721.

ASAPH, III. 721-Psalms ascribed to, XVIII. 679

(St), city in North Wales, III. 721. Asaphus, trilobites, XVII. 102. ASAR-ADDON, III. 722, 778.

#### ASA—ASH

ASAROTUM, III 722

ASBESTOS, III 722, II 716; XII. 367; XV 81-mines of, m Anglesea, III 146 -specific gravity of, XII. 88-paper made from, XVII. 251.

Ascalaphus, genus of insects, IX. 178 ASCALON, III. 722; XVII. 182, 514-battle of. 196.

ASCANIUS, son of Æneas, TII 722 Ascaris, genus of entozoa, XXI 980, 974 et seq .-- in horses, 569.

ASCENDANT, in astrology, III 722 Ascension, island, III. 722, II 229 - DAY, III. 723.

- in astronomy, III 723; IV 3. Ascensius (Badius), printer, XXI 401. ASCETERIUM, III. 723. ASCETIC, III. 723.

ASCHAFFENBURG, in Bavaria, III 723 ASCHAM (Roger), III 723; VIII. 796— notices of Queen Elizabeth by, 635— account of Lady Jane Grey, in his Schoolmaster, XI 63-on Morte & Arthur, XIX. 263.

Aschersleben, a circle and city in Prussia. III. 724.

Ascia, genus of insects, IX. 239. Ascidia, genus of mollusks, XV. 334-A. gelatinosa, 333.

Ascidiadæ, family of mollusks, XV 333. Ascidians, mollusks, compound, XV 330; propagation of, 331, 332-solitary, 332, propagation of, 333.

Ascidiformes, zoophytes, XXI. 986. ASCII, III. 724.

ASCITÆ, a sect of Montanists, III. 724. ASCITES, III. 724; XVII 690-in cattle, XXI. 567.

ASCLEPEIA, festival, III. 724. ASCLEPIAD, III. 724.

Asclepiadaceæ, nat. order of plants, V. 199 ASCLEPIADE, III. 724; XIV. 451
Asclepiades, XIV. 453—on mental dis

orders, 527-their surgery, XX. 810, 812. ASCLEPIODORUS, III 724; XVII 57 Ascoceras, fossil mollusks, XVII. 112 ASCOLI, city of Italy, III. 724-delegation of, XVII. 243

ASCOLIA, festival, III 724. ASCOLIASMUS, III. 724. Ascolno, X. 469. Asconius (Q. Peditanus), III. 725.

ASCRIPTICH, III. 725; II 74. ASCRIPTITII, III. 725.

ASCRIPTITI, III. 725, VI. 292; XX. 457—
defeated by the Romans, VI. 297, 298 -his cruelties, 301, 303-suicide of his wife, 303

ASELLIO (Gasparo), III. 725—his discovery of the lacteal vessels, II. 761, 803. ASH, III. 725.

- mountain, XVII. 759—juice of its berries in dyeing, VIII. 286
— prickly, order of plants, V. 189.

residuum of combustion, XX. 352 —of agricultural plants, IL 385, 386—of tumber trees, XXL 268—tumber, XVII. 758; XXI 274—

used in coachmaking, VII. 43-specific gravity of, XII. 89—strength of the wood, XX 757, 758.

tree, V. 199; XVII. 758—varieties

of. 764

use of the term in goology, XV. 188, n. 1

ASHANTEE, in Western Africa, III. 725;

ASHBOURNE, town in Derbyshire, III. 727. ASHBURTON, town in Devonshire, III. 727

-group of rocks, XV 199. (Lord) See Dunning.

(Lord), north-eastern boundary treaty settled by, XXI. 796. ASHBY-DE-LA-ZOUCH, III. 727—population, XIII 821—canal of, XXI 788.

Ashcroft's railway chair, XVIII. 759 ASHDOD, III. 727; IV. 337; XVII. 182, 514. ASHES, III. 727—proportion found in dif-ferent plants, and the different parts of plants, II. 385, 886; V. 96-composition of, II. 886.

Ashey Down and Beacon, Isle of Wight, XXI 861.

#### ASH-ASP

ASHFORD, in Kent, III. 727. ASHI, or Asser, III 727. Ashkanian kings of Persia, XVII. 435. Ashkoko, quadruped, XIV. 199. Ashlar, III 727—walls, V. 738. ASHMOLE (Ehas), antiquary, III. 727—founder of the Ashmolean Museum at

Oxford, 728; XVII. 35. ASHOVER, in Derbyshire, III 728 Ashpitel (Mr), on the proportion of stairs,

ASHRAFF, town in Persia, III. 728. ASHTAROTH, III, 728.

ASHTON-UNDER-LYNE, in Lancashire, III.

ASHTORETH, III. 728-worshipped by the Phœnicians, XX. 906. Ashur, VIII. 46.

ASH-WEDNESDAY, III. 725-confession of

sins upon, VIL 201.

Asia, III. 729—prevalence of castes in, VI. 314—British colonies in, VII. 147 trade with England, VIII. 732, 733entomology of, IX. 68-ethnology, 344, 351-portions of, known to the ancients, X. 464—languages, XIII 205 et seq., 215; XVII. 527 et seq.—invasion of, by Alexander the Great, 766—origin of the medical profession in, XIV. 450—extent of its coast line, XVII 585—mean elevation of its surface, 590-snow level, 602 -mammals of, 631, 632-birds, 633, 634 —height of mountains, 643—rivers, 606, 607—volcanoes, 589; XXI 603; plants, XVII 627, 628, V. 225, 228—serpents, XIX 53—reptiles, 30, 35 et seq; XVII. 634—a Roman province, XIX 315— Cmsar's campaigns in, 326—trade with Russia, 541—course of its rivers, 181—map of, III. Plate.

MINOR, III. 758-Greek colonies in, VII. 135—its fitness for immigrants, VIII. 650—mountains of, XVII. 597; their heights, 643, 644-plants, 627missions in, XV. 271-coins of, XVI. 374, 375-architectural remains in III. 498, 503-silk, XX. 277-Osmanlıs in, XXL 378

ASIARCHÆ, pagan pontiffs of Asia, III. 760.

Asiatic islands, volcances of, XXI. 603. - Societies, III. 759. Asiatres, IX. 344.

ASIENTO, III, 760. Asilici, family of insects, IX. 234.

Asılus, genus of insects, IX. 235. ASINARA, ISland, III 760. ASINIUS POLLIO, III 760.

Asiphonata, section of mollusks, XV. 381. Asirica, genus of insects, IX. 169. Ask (Robert), rebel, VIII 702.

ASKEATON, Irish town, III. 760. ASKERN, in Yorkshure, III. 760. ASKEW (Anne), III. 760. Askrigg, in Yorkshire, III. 760.

Asmanshausén, wines of, XXI. 885. Asmodeus, III. 760. See Abaddon. ASMONEUS, III. 760.

Asmuss (H. M.), his work on insects, IX. 19.

Asna, III. 760. See Esne. Asolo, Italian town, III 760. ASP, poisonous serpent, III. 760. ASPARAGINE, III. 760, 762; VI. 518. Asparaginous plants, XI 742. ASPARAGUS, III. 760; IX. 761-culture of, XL 742.

- stone, XV. 94. ASPASIA of Miletus, III. 760; XVII. 789; XX. 371, 373, 382.

ASPECT, in astronomy, III. 760—characters of abbreviations of the aspects, VI.

ASPECTANT, in heraldry, III. 760. Aspen-tree, XVII. 759.

ASPER (Spiritus), in grammar, III. 760;

Aspergillum, genus of mollusks, XV. 350, 352—fossil, XVII. 108. Asperifoliæ, family of plants, V. 201.

ASPERMOUS, in botany, without seed, III.

#### ASP-ASS

ASPERN, Austrian village, III. 760. ASPEROSA, Turkish town, III. 760.
ASPEALTITES, lake, III. 760; XII. 735;
XV. 145, XVII. 187, 189, 591. See Dead Sea ASPHALTUM, III 762; IV 736, XV 124—pavements made of, XIX. 227; XX. 715-lake of, in Trinidad, XXL 351 See Bitumen. ASPHODELEE, order of plants, III, 762. Asphodelodians, VL 286 ASPHYXIA, III. 762; XIV. 430; XVII 663 —from drowning, VIII. 181. Aspic, serpent, XIX. 52, 71. ASPICUETA (Martin de), III. 762. Aspidiscus, fossil corals, XVII. 97. Aspidogaster, genus of zoophytes, XXI. Aspidoparia, genus of fishes, XII. 257 Aspidophorus, genus of fishes, XII. 282. Aspidorhynchus, genus of fossil fishes, XII. 336. Aspinwall, town in Panama, XVII. 226 Aspirate, II 613. Aspistes, genus of insects, IX. 230. Aspredo, genus of fishes, XII 260, 263 Aspro, genus of fishes, XII 275. Ass, III. 762, XIV. 201-milk of, XV. 11-Arabian wild, III. 347—Asiatic, 740—Indian wild, XI 456—in Egypt, VIII. 432 in Beykaneer, IV 691—in Europe IX 387—Palestine, XVII 191—Persia 423-organs of voice, III. 101-strength of, XIV. 417. Assa, Egyptian king, VIII. 457. ASSAFETDA, III 762; V. 195; XVII 421. Assahan, in Sumatra, XX 806. Assal, lake in Abyssima, II. 55 ASSAM, III 762; IV. 651-tea-plant in, 649, XXI. 81 — analysis of the tea-growing soil in, 84—value in the market, 91—mountains, XVII. 598. Assaum, ancient copper com, III. 765; XVI 384. Assassin, III. 765. Assassination, in Virginia, XIII. 750—in Scotland, in the sixteenth century, VI. 626 Assault, in Law, III. 766. ASSAY, III 766. Assayer, VIL 74 Assaving, III. 766-touch-needle, XXI. 276. Assellota, crustaceæ, VII. 543. Asselyn (Hans), Dutch painter, III. 774 Assemani, III. 774. ASSEMBLY, III. 775 - of the people at Athens, IV. 214. - General, of the Scottish Church, III. 775, XVIII. 493, 489 — Hall, in Edinburgh, VIII. 899—schools, XV. 825. — national, of France, X. 50. ASSEN, III 775. ASSENEDE, town of Belgium, III 775 ASSENHEIM, III. 775. Assens, Danish town, III. 775. Asser (John), III. 776. Assessed taxes, in Scotland, XIX. 809. Assessor, III. 776. Assets, in law, III. 776. ASSIDEANS, III. 776. Assidui, III. 776. ASSIGNAT, III, 776. ASSIGNMENT, III. 776; IV. 417. Assimilation, III. 776; XVII. 663gans of, in the crustaces, VII. 539. Assume, country in Africa, III. 776. Assises de Jerusalem, IX. 525. Assisi, Italian city, III. 776. Assithment, III. 776. Assize, III. 776—of bread, IV 234. Associate Synod of Original Seceders, XVIII. 500, 502. ASSOCIATION, III. 776 African, II. 201. agricultural chemistry, II. 265, 374. British, for the Advancement of Science, IIL 816. OF IDEAS, III. 776; VII. 675; XIV. 594; XV. 286; XIX. 115—laws

of, XIV. 595—its power in regard to avarice, &c., I. 382, 384—Mackintosh's

theory of, considered, 305-in connec-

ASS-AST tion with the sense of the beautiful, IV. 541 et seq -Condillac on, VII. 284-its influence in dreams, VIII. 176-Plato on, XVII. 805. Association (Royal), for promotion of the fine arts in Scotland, VIII 397. Assortzie, in law, III. 776 ASSONANCE, III. 776 ASSUAY, in Ecuador, III 777. Assumpsit, in law, III. 777. Assumption, festival, III 777-in logic ib -deed of, ib -island, ib -capital of Paraguay, 1b., XVII. 268. Assumptive arms, in heraldry, III 777 Assurance, or Insurance, III 777. See Annuities, Insurance Assus, ancient city of Mysia, III 777 Assye, in Southern India, III 777-defeat of Scindia at, XI 167 Assyn-kalessi, village in Asia Minor, III. Assynt, in Sutherland, XX. 840. —— (Loch), XIX. 794, XX. 840

Assyria, III. 777, XVI 272—architecture of, III. 438, 500—tabular libraries of, XIII 382-origin of the name, XX. 901—Assyrian empire, III, 741, monarchy, XI. 542; XV. 412—language, XIII 209—bricks of, XVIII. 431 sculpture of, XIX. 846. ASTABAT, Persian town, III. 779. Astacilla, genus of crustacea, VII 542. Astacus fluviaths, VII 542. ASTAFFORT, French town, III 779. Astarte, goddess, III. 728—genus of mol-lusks, XV 150—fossil, XVII. 107. Astartidæ, family of mollusks, XV. 350fossil, XVII. 107. Astata, genus of insects, IX 196. Astatic needle, XIV 90; I 976 Asteia, genus of msects, IX. 256 ASTELL (Mary), III. 779. ASTELL'S Island, III. 779. Asteracantheon, zoophytes, XXI. 995 Asteracanthus, genus of fossil fishes, XII. Asteraceæ, nat. order of plants, V 196. Asteriadæ, fossil star-fishes, XVII. 99 zoophytes, XXI. 984, 994, 995. ASTERISK, III. 779. ASTERISM, III 779; IV. 12, 79. Asterodermus, genus of fossil fishes, XII 349 Asteroida, fossil polypes, XVII. 96.

zoophytes, XXI 1003—arrangement of, 1004. Asteroidea, fossil echinoderms, XVII 99. Asteroms, III 779—discovery of, I 835, 859, IV. 91—the greater number discovered by Mr Hind and M Gasparis, 1b.—list of, I. 859, 996; IV. 91 Asterolepis, genus of fossil fishes, XII. 337; XVI 719; XVII 120, 125. Asteropterychius, fossil fishes, XVII 117. Asteropteryx, genus of fishes, XII. 307. A-STERN, sea-term, III. 779. Astr., in Piedmont, III. 779-XXI. 886. Astle (Thomas), antiquary, III 779—on the origin and progress of writing, II 612; IV. 706. Astley (Mr), his method of manufacturing sal-ammoniac, II. 723. Astolphus, Longobard king, XII. 642: XIII. 642. Astoma, genus of arachnides, IIL 389. ASTOMOUS, III. 779 Astor (J J.), X. 346; XVI 225. - House, hotel, XVL 225. Library, at New York, XIII 430; XXI. 424. ASTORGA, Spanish city, III 779.
ASTORIA, a settlement in Oregon, III 779: ASTRABAD, in Persia, III. 779, 780. Astræa, III. 780—planet, IV. 91; I. 859. Astræideæ, fossil corals, XVII 97. Astragal, in architecture, III. 507.

ASTRAKAN, III. 780, XIX. 478—climate of, XIV. 674.

#### AST-AST

Astrakanıte, mineral, XV. 99 Astral lamp, XIII 171 Astrapæus, genus of insects, IX 103. Astrape, genus of fishes, XII 327. Astrapia, genus of birds, XVI. 768. Astreidæ, zoophytes, XXL 1005 ASTRINGENTS, III. 780 Astroblepus, genus of fishes, XII 262, 260 Astrodermus, genus of fishes, XII. 298. ASTROLABE, III 780, XX 124. ASTROLOGY, III 780, IV. 435; VIII 54 -its extensive dominion over the human mind, I 600-taught in universities, ib -introduced into almanaes, II 598—Babylonians addicted to, IV. 347—in Chaldæa, VIII 54—Persia, Astronomical instruments, IV 149, 110; I 847—Borda's repeating circle, V 37
—Cavendish's method of dividing, VI. See Quadrant, Telescope, &c tables, IV 120-139 Royal, Society of London, III 815 —founded by Baily, I 852 astronomy, III. 781—history of, ib; I. -theoretical, IV. 1-physical, 800, 801-96, I. 809, 824—practical, IV. 109, I 832—sidereal, 838, 861—nautical, XVI 34-considerable progress made by the ancients in, I 567, 597-views of those who first studied the heavens, 597, 771—universally believed by the ancients that the earth formed the centie of the universe, 598-introduction of the epicycle by Apollonius Pergæus, 1b - application of the epicycles to explain phenomena by Hipparchus, ib -other epicycles introduced to explain the irregular motion of the moon and planets, 1b -the system of the heavens thus became extremely complicated, ib .- advantages which were derived from the epicycle, 599-the hypothesis of epicycles and of centies of uniform motion accommodated to the state of science, ib -dawn of a new era, Copernicus and Tycho, 600-correction of Ptolemy's tables, by Alphonso, king of Castile, ib -contributions to the science by Purbach and Regiomontamus, 1b -publication of Copernicus's great work Astronomia Instaurata, containing the discovery of the earth's annual and diurnal motion, 601-observations of the heavens by Brahe, 602, see Brahe - discoveries of Kepler and Galileo, see these articles-cyldence of the Copernican system developed by these discoveries, 608-beneficial icsults of it being established, 609-Descartes' theory of the universe; see Descartesfirst complete system of astronomy in which the elliptic orbits were introduced was the A Philolaica of Bulhaldus, 611 -hypothetical views contained in that work, 1b -contributions to the science by Horrox, Ward, Riccioli, Hevelius, Hooke, Cassini, and Roemer; see these heads-first establishment of academies. 615—figure and magnitude of the earth see Figure of the Earth-discovery of universal gravitation by Newton, 670; see also Newton-references of the ancients to weight or gravity, 673-clearer views of Copernicus and Kepler, 674-Galileo believed that gravity was a principle belonging to each of the planets individually, but not extending from the one to the other, 675-near approximation to the truth by Hooke, -causes of irregularities in the motion of the moon, 676—Newton's deter-mination of the shape of the earth, 677 -discovery of the aberration of light by Bradley, 685-Newton's theory of the moon a work of genrus almost superhu-

man, 779-lunar theory first expanded and improved by Calandrini, ib -com-

pleted by Dr Stewart and Walmesley, 780-examination of the subject by

Clairaut, ib -astronomical discoveries of

Mayer, 781; see also Mayer—calculations and discoveries of Euler regarding

#### AST—AST

the motions of the planets, 781, 782appearance of Halley's comet, and calculations of Clairant regarding its retardation, 783-size and consistency of comets, and methods of discovering their orbits, 784-notice of Lagrange's discourse on the libration of the moon. 785, 813-researches of Lagrange and Laplace regarding the planetary motions, 785, 811-Laplace's discovery of the moon's secular equation, 786—La-place's complete theory of the motion of Jupiter's satellites, ib, 815description of celestial refraction, and the lunar and solar parallaxes, 787discovery of a new planet by Herschel, 788-discovery of four small planets, 789-number of stars which passed over Heischel's field of view in a quarter of an hour, ib -speculations regarding the celestial bodies, and the constitution of the universe, 790-various estimates of the number of comets within the known extent of our system, 791-observations on the earth's internal structure, ib on the limits of the atmosphere, 792on double and multiple stars, 793-stability and permanence of the solar system, 811-Leverner on the eccentricities of the larger planets, 812-motions of apsides and nodes, ib .- Poisson's addition to the theory, 813-La-place's improvements in the lunar theory, 814 -- contributions to science by Legendre, Abel, and Ivory, 822, 823—progress of physical astronomy since the publication of the Mécanique Celeste, 824-Poisson, ib, 825on the perturbation of the earth by Venus, 825—MM. Plana and Hansan on the lunar theory, ib, 826—progress of physical astronomy in America. 827-discovery of Neptune from theory, by MM. Leverner and Adams, 827-ir regularities of the motions of Uranus. 828, hypotheses to account for them, -Leverner's investigations, and their result, 829-discovery of Neptune by M Galle, 830-M1 Adams preceded M. Leverrier in a similar investigation, ib -observations on Neptune as a fixed star, 831-principal inequality of Uranus and Neptune, 832—progress of practical astronomy from 1770 till 1810 -Maskelyne, 833; see that article-his determination of the lunar orbit, and its application to navigation, ib.-his observations on the attraction of mountains, 834-his improvements at Greenwich, 835-Mitchell and Cavendish's experiment on the density of the earth, 834—discovery of four small planets, 835—Olbers, Plazzi, Harding, Lacallle, ib, 836—Delambre, 836; see that article—arcs of meridian, ib., 837—Sir William Herschel, 888—history of sidereal and telescopic astronomy to 1820, ib. -discovery of Uranus, 840-Herschel on double stars, 841; on nebulæ, 842, 843 -on the grouping of the stars in space, and on the milky way, 843, 844 - on the motion of our system in space, 845 -modern astronomical details since 1810, 847—Bessel's contributions to the science, 848, 849—Airy's labours in physical and practical astronomy, 849introduction of the galvanic method of observation, 850-Borda, his improvement in the manner of making pendu-lum observations, 851-Kater, 852-Baily, ib; see that article-reduction to a vacuum, ib -Prof. Stokes, 852-Col. Everest, ib -M. Struve; see Index -M. Foucault's pendulum experiment, 854-Encke, 855, see Index-cometary astronomy, ib., 856—Gambart, 858-Hind, 859-discovery of new planets or asteroids, ib.—M. de Gasparis, ib —as-teroids, ib.—Lassell, 860—new secondary planets, ib .- sidereal astronomy since 1820, 861-double stars, ib. Sir John Herschel, ib.; see Index-orbits of double stars, 862-brightness of stars

#### AST-ATH

and variable stars, 1b -Earl of Rosse, 863; his reflecting telescopes, ib.—latest observations on nebulæ, ib -- Henderson and Bessel, 1b.—parallax and distance of the fixed stars, 1b. 864—how scriptural references to, are to be interpreted, 455—Aristotle on, III. 544—catalogues of the stars, VI 331—Chinese knowledge of, 584—knowledge of the Druids in, VIII. 185-of the Egyptians, 442—of the Japanese, XII 694—Persians, XVII. 430—speculations of Pythagoras in, XVIII 711-method of the least squares, 638—Adam Smith's history of, XX. 345—astronomical determinations of the periodical forces which act on the sea or on a lake, XXI 261-astronomical observations in connection with the trigonometrical survey, 335 See Aberration, Acceleration, Dialling, Sun, Moon, the different planets, &c.

ASTRUC (Jean), physician, IV. 156
Astur, genus of birds, XVI. 743
ASTURIAS, IV 156, XX. 493—Moorish
kingdom of, XX. 461—Christian kingdom of, 467 ASTYAGES, king of the Medes, IV. 157;

VII. 612.

ASTYANAK, IV 157.

ASTYNOMI, IV. 157. ASWAN, IN Egypt, VIII. 514 See Syene. ASYLUM, IV. 157—Royal Naval, XI. 49 Asylums, lunatic, XIV. 528, 537-inmates of, VIII. 748. See Sanctuary.

ASYMMETRY, IV. 157 ASYMPTOTE, IV 157, VII. 275; IX. 703 ASYNDETON, in grammar, IV 157
Asyoot, Egyptian town, VIII 505, XX. 308

ATACAMA, in Bolivia, IV. 157, 821, 827; VI. 541, 547

ATACAMITE, mineral, IV 157; XV 104

ATAHUALIPA, the last of the Incas, IV 157; XVII. 464—his murder represented as a tragedy, II 689.

Atak, XX 303. ATALANTA, IV. 157. ATAMELIK, IV. 157

Atarvaveda, XXL 531. Ataulphus, Goths under, XX. 459

ATCHAFALYA, river, IV. 157. ATE, IV 157.

Ateles, genus of mammalia, XIV. 141. ATELLANZ FABULE, IV. 157; VIII 141,

ATERGATIS, IV. 157. ATESTE, Italian town, IV. 157. Ateuchus, genus of insects, IX. 119. ATH or Acth. IV. 157.

ATHABASCA, or Athapescow, river, IV 158. Athabaskans, people, IX. 347-language, XTIT. 219.

Athaha, genus of insects, IX 183.

ATHALIAH, IV 158 ATHANASIAN CREED, TV 158-

at the desire of Joyan, VII. 809.

ATHAMASIUS (St), IV. 158—his opinion of apparitions, III. 311—death and character, VIII. 473.

ATHANATI, IV 158

ATHANERIK, IV 158; VII. 310 Atheism, XXI. 185-prevalent among the

higher classes at Paris about the middle of last century, I. 181-contributed to aggravate the atrocities of the Fiench Revolution, 182—a principle tending to

ATHEIST, IV. 158; I. 457. ATHELING, IV. 158; VIII. 390.
ATHELINGEX, or Noble's Island, in Somersetshire, IV 158; XX. 410.

ATHELSTAN, Saxon king of England, IV.
159-reign of, VIII. 658-his laws regarding the coinage, VII. 73.
ATHENEUM, IV. 159-in Belgium, 619

ATHENÆUS, mechanician, IV. 159. - physician, founder of the Pneumatic sect, IV. 159-on the use and qualities of wine, XXI 882.

grammarian, IV. 159. ATHENAGORAS, IV. 159; IX. 492.
Athenians, demoralising effects of a severe Atkno, Egyptian lake, VIII. 429.
ATKNYS (Richard), IV. 176; XVIII. 524.

#### ATH—ATK

pestilence on, I 460, 461-their disbelief in a future state, ib—their mode of punishing adultery, II. 155—their national character, IV 210—effects of their political institutions on, 212their attachment to the drama. VIII 135-their love of speculative inquiries, IV 211-their mode of life unfavourable to the formation of eccentric characters among them, VIII. 141—their war with the Sicilians, IV. 205 their religion, 216—their personal beauty not remarkable, XIX 850 funeral rates, X 344—their attacks on Syracuse, XX. 899

ATHENODORUS, IV 159. ATHENRY, Irish town, IV. 159.

ATHENS, IV 159-Academy of, II 59choragic monument of Lysicrates at, III. 442, 444, 462, of Thrasyllus, 462-Stuart and Revett's Antiquities of, 456 — the Parthenon, 461—Propylæum, 462—Acropolis, II. 116; III. 466—army of, 625—taken by Xerxes, IV. 200-rebuilt and fortified, ib-plague at, 204-captured by the Spartans, 208 -1 estored to liberty by Thrasybulus, 210-commerce of, VII 185-the Thirty tyrants, IV. 208-dials on the Tower of the Winds, VII 774-dials of Phædrus, ib —tragic writers of, VIII. 138—comic writers, 139-Elgin marbles brought from, 632-monarchy of, XV. 412coinage of, XVI 359, 371—state of philosophy in, in the time of Plato, XVII 793, 795—works on its topo-graphy, IV. 159, n 172—improved by Pericles, XVII 412—decline of art in, XIX. 858-its condition in the time of Socrates, XX. 370-war with Sparta, 501 -hostility between Athens and Thebes XXI. 177.

(Modern), XI 17, IV 174-sieges in the late revolutionary wai, ib.

several towns in US so named, IV.

Atherina, genus of fishes, XII. 291-2 Atherine, family of fishes, XII. 291. Athermidæ, family of fishes, XII. 292. Atherix, genus of insects, IX. 232. ATHEROMA, in surgery, IV. 174. Atherospermacea, nat order of plants, V. 204.

ATHERSTON, in Warwickshire, IV. 174, XXI 738.

ATHERTON, in Lancashire, IV 174-battle of Atherton Moor, V. 404

Atherura, genus of mammalia, XIV 187 ATEIAS (Joseph), TV 175—his edition of the Hebrew Bible, 697. ATHLETÆ, IV 175

ATHLONE, in Ireland, IV. 175; XIX 422; XXI 839, 841—taken by the English in 1690, V. 443.

ATHOL, in Perthshire, IV. 175 - deer

forest of, XX 212.

(Duke of), Isle of Man purchased from, XIV. 248—salmon caught by, IX.

Athor, Egyptian deity, VIII. 437; XI. 384, n. 11.

Athorybia, genus of zoophytes, XXI 1006 ATHOS, IV. 175; XI 11. Athothis, Egyptian king, VIII. 454. Athribis, in Egypt, VIII. 497. Athry, in Kildare, IV. 175; XIII. 83 Athyris, fossil mollusks, XVII. 103, 104. ATIENZA, Spanish town, IV. 175 ATILIUS (M.), Roman poet, IV. 175 ATIMIA, IV. 175.

ATINA, Neapolitan town, IV. 175. Atıtlan, lake, XI. 76. ATKINS (Sir Robert), IV. 175-his son,

176 Atkinson (Stephen), his work on the gold mines of Scotland, XV. 233, n.
on the Altai mountains, XVII.

(Mr), on Mesmero-phrenology, XX.

440. Atkinson's melon-pit, XI 784.

#### ATL-ATM

Atlanta, genus of mollusks, XV. 368, 375fossil, XVII 109. ATLANTES, IV 176.

ATLANTIC OCEAN, IV. 176; XVII 576methods of sounding, XX 26—com-mencement of steam-navigation across, 639-basin of the North Atlantic, XVII 574, 575—temperature of, 577—Atlantic islands, volcanoes of, XXI. 603 See Gulf Stream.

telegraph, XXI. 113, 94, 95, 99, 109.

Atlantidæ, family of mollusks, XV. 375. ATLANTIDES, the seven stars, IV. 177. ATLANTIS, IV. 177.

the New, title of one of Lord Bacon's works, IV 177.

ATLAS, king of Mauritania, IV 177; XIV. 360-inventor of astrology and the doctrine of the sphere, 361.

mountains in Africa, IV. 177; XV. 593, XVII. 596-height of, 644. book of maps, IV 177.

one of the vertebræ, IV 177; III.

5, 75—its motions, 8.
—— a kind of silk, IV, 177

ATMOMETER, IV 177; I 769; XIII. 344.

ATMOSPHERE IV 178-discovery of its elasticity, I 597-experiments to ascertain its density at different heights, 729-its action on the spectrum, 915, XVI 598 -sound transmitted by the, II 98, 103 -velocity of sound, 104 - schemes for navigating the, 168—diminution of its temperature at increasing heights, 182; XIV 640—its composition everywhere essentially the same, II. 184, VI 464—its refrigerent power, IV. 9—of the sun, 30; XIV. 639—moon, IV. 43— Venus, 66—Mars, 67—Ceres, Pallas, and Vesta, 68, 69—its pressure, 450, 451; VI. 464; XIV. 638; XVIII. 26—gradation of its density, IV 462-G. Beccana on its electricity, 560-its composition, VI 463—why warmest in its lowest strata, 778—its capacity for heat at different degrees of rarrty, 1b -circulation of air between the poles and the equator, 782 — Cavallo on, 345 — Cavendish on, 352-air discharged from water in the act of freezing or boiling, VII 103—ammonia in, VI 462, IL 376—carbonic acid in, VI 464; IL 375; oxygen in, VI 464—a source of the organic constituents of plants, II 375quantity of, necessary for respiration, VIII. 55—remarkably dry and clear in Egypt, 422—electricity of the, 577, I. 962; XIV 660; XXI. 116-influence of its density on evaporation, IX. 412no muratic acid in sea air. 415-resistance to projectiles, XI. 106, 115 et seq, XVIII. 67; to the motion of the per dulum, I 853-specific gravity of, XII. 89-absorbs and retains aqueous vapour. 186-Ingenhouz's experiments on, 380, 381-terrestrial magnetism supposed to reside in, XIV 66 - influence of its purity and hygrometric state on health, 443—descent of stones from, 629; theories as to their formation, 633, 634-mobility of, 636; XVIII 623-nature and constitution of, XIV. 638-mass and extent, 639-decrease of temperature on ascending, 640, 641-relation between the temperature and pressure of, 641, 642—atmospheric waves, 650—hygrometric state of, 674—distribution of moisture through, 675-dependency of atmospheric pressure, &c., on the direction of the wind, 677—analysis of, from Cornish mines, XV. 225-refraction of, I. 823-unusual refraction and reflection of, XVI. 691-colours of, ib -polarization of, 692—its influence on the pendulum, XVII. 387—its relation to physical geography, 572-total mass of, ib .- refraction of, in the polar regions, 584—its influence on the nature and quantity of food, 658—mechanical properties of, XVIII. 22 et seq.-height of, 27, 55—compressibility, 28, 51 et seq-lays of hydrostatics applicable to, 29-

#### ATM—ATT

elasticity, 23, 30, 53-expansibility, 31, 56 - heterogeneous nature of, 53 aerial pulses, 70—effects of respiration on, 73; XVII. 662—Priestley's re-searches, XVIII. 514, 515—effects of the different states of, on health, XIX. 608, 609-poisons disseminated by, 609 source of air for ventilation, XXI. 540; ingress and egress of, ib; amount of, necessary for, ib; purity of, 1b .temperature, ib, evil effects of a vitiated, 539; wholesome effects of a pure atmosphere, ib. See Meteorology, Pneumatics, Projectiles, Acoustics, Climate, Cloud, Ventilation. Atmospheric dust III. 210.

Atmospheric steam-engine, I. 867, 868;

XX 575 et seq.
Atna languages, XIII 220.
Atolls, XIV 109; XVII 583; XXI 1003.
ATOM, IV. 184—the simplest extended particle consists of four atoms, XX. 754

ATOMIC THEORY, IV 185; VI 443 atomic volumes, 448—originated with Dalton, VII 637, I 935, 936—its importance to the progress of chemistry, 937 - its reception in England and France, 938.

ATOMICAL PHILOSOPHY, IV 185-its supeperiority to all other conjectures of the ancient philosophers concerning the material universe, I. 71-first advanced by Leucippus, XIII. 348-in the Epicurean philosophy, IX. 272.

ATONEMENT, IV. 185. See Theology. Atoor, island, IV. 185.

Attractocerus, genus of insects, IX. 112.

Attracto, river, IV. 185—line of canal across the Isthmus of Panama, II. 712 ATREBATII, IV. 185, 666.

ATREUS, IV. 185. ATRI, or Atria, Neapolitan town, IV. 185. ATRIENSES, IV 185.

ATRIUM, IV. 185, III. 471, 472 Atropatene, XIV. 420

ATROPA, a genus of plants, IV 185; V. 201, 202. See Nightshade. Atropaceæ, nat. order of plants, V. 201.

ATROPHY, IV. 185; XVII 663, 690. Atropia, alkaloid, V. 202, XIV. 438. ATROPOS, IV 185; XVII 272. Atrypa, fossil moliusks, XVII. 104, 103. Atta, genus of insects, IX. 194 ATTACHMENT, in law, IV. 185. ATTACOTTI, IV. 186, V 375, VI. 74. Attagenus, genus of insects, IX. 115

ATTAINDER, in law, IV 186—corruption of blood by, VII 416. ATTALEA, genus of palms, IV 187. ATTALEIA, now Adaha, city of Pamphylia, TV. 187.

Attalus, XVII 410; XIX 315. ATTAR, or Otto of Roses, IV. 187; V. 191; XIII. 71; XVI. 496-preparation of, in

Bulgaria, V. 760. Attelabides, tribe of insects, IX 138. Attelabus, genus of insects, IX 138. ATTENTATES, IV. 187.

ATTENTION, IV. 187; XIV. 574; XIX. 116, 118.

ATTENUATION, IV 187.

Atterbom, Swedish author, XIX. 700. ATTERBURY (Dr Francis), IV 187 - his trial 507-his share in answering Bentley's work on the Epistles of Phalaris, -his friendship with Pope, XVIII. 332 — his letters opened at the post-office, 409—his intimacy with Swiit, XX. 873.

ATTICA, IV. 191; XI. 12, 18—institution of castes in, VI. 815—names of months. 666-climate of, XI 13-coinage of, XVI. 371—invaded by the Spartans, XX. 499—silver mines of, XV. 280. ATTICUS (Herodes), an Athenian, IV. 218. (Tirus Pomponius), a Roman, IV.

ATTIGNY, French town, IV. 218. ATTILA, king of the Huns, IV. 218; XIL.

#### ATT-AUD

Attiret (Frère), VI 593 Attitudes of man, III 40, 41. ATTLEBOROUGH, town in Norfolk, IV, 218 ATTOCK, in Hindustan, IV 218; XII, 378. ATTORNEY-AT-LAW, IV. 218. ATTORNEY-GENERAL, IV. 219

ATTRACTION, IV. 219-attractive force of cohesion, IL 140-capillary, VL 207, XII 90, 102; L 890—theory of, XII 96—chemical, VI. 439, 450—electrical, VIII. 536, 554, 556; I. 989—law of, VIII. 549—of spheres, ib—of planes, ib -of ellipsoids, I. 823 - mutual, of floating bodies, XII 95-magnetic, XIV 19—committee of, I. 834—theorems about attractions, 823, 983, 984—Cavendish on, VI. 354. See Dynamics, Gravitation, Tides

- OF MOUNTAINS, IV. 233; L 834,

ATTRIBUTE, IV 233

ATTRIBUTES, in theology, IV, 233; XXL 189 -divine attributes ascribed to Christ, 209; to the Holy Spirit, 217—names of God from his, 189—in logic, IV.

ATTRIBUTIVES, IV. 233; X. 745, 790. ATTRUCK, Persian river, IV. 233 ATTU, an Alcutian island, IV. 233 Atum, Egyptian deity, VIII 437 Aturia, fossil mollusks, XVII. 110, 112 Atwell (Mr), his explanation of the cause of intermittent springs, XVIII. 81. ATWOOD (George), IV. 233—on evapora-

tion, IX. 407. ATWOOD'S MACHINE, IV. 234-observations on moving bodies made by, XVII. 378. Atyadæ, XIII. 747

Atychia, genus of insects, IX. 210 Atypus, genus of arachnides, III 378, ATYS, IV. 234—son of Crossus, VII. 507. AUBAGNE, French town, IV. 235. AUBAINE, IV 235.

AUBE, in France, IV. 235.
Aubé (C), his entomological works, IX. 19.

AUBENAS, town in France, IV. 235. AUBIGNÉ (Théodore Agrippa d'), IV. 285

(d'), on Luther and Melancthon, XIV. 476.

AUBIGNY, town of France, IV 235. Auboin (Stephen), his work on insects, IX. 19.

AUBREY (John), IV. 285-his anecdotes of Lord Bacon, L 289—his notices of Milton, XV 20, 21, 31, 34; of Sir William Petty, XVII. 502—on Surrey, XX. 836. Anbry (M.), on non bridges, XII. 578. AUBURN, a colour, IV. 235.

- a town in New York, IV. 285penitentiary or state prison at, XVIII.

AUBUSSON, in France, IV 235. AUCH, city in France, IV 235. Auchenia, genus of mammalia, XIV. 205, Auchenipterus, genus of fishes, XII. 262. Auchinesss, ruins of, III 215. AUCHTERARDER, IV. 236. AUCHTERMUCHTY, IV 236.

Auckland (Lord), governor-general of India, XL 667—his opinion as to whether all treaties are annulled by war, V. 588.

- capital of New Zealand, IV. 236;

province of New Zealand, XVI. 283. BISHOPS, town in Durham, IV.

- islands, IV. 236, 268.

AUCTION, IV. 238. AUDÆUS, IV. 237.

AUDE, in France, IV. 236. AUDEBERT (Jean-Baptiste), IV. 236.

Audinet-Serville (M.), his works on in: sects, IX. 19. AUDITORIUM, IV. 237.

AUDITORS, IV. 286, 287.
Auditory nerve, III. 47; XVII. 675. Audley (Lord James), at the battle of Politiers, VI. 614.

AUDOUM (Jean Victor), French naturalist IV. 237-his works on insects, IX. 16.

#### AUD-AUL

AUDRAN, several engravers of that name, IV 237, 238-Gerard, 237; VIII 806 AUDUBON (Jean Jacques), naturalist, IV. 238, XXI. 424—his work on the quad-rupeds of America, XIV 240—on North American birds, XVI. 733, 775, 812, 814
—on the turtle, XIX. 18—on the alligator, 25, 26-on the harlequin snake,

Auersperg, German poet, XVIII. 119 Auerstadt, in Prussia, IV. 239—battle of, X. 143; XII. 720

Aufidius (Cornelius), a blind Roman author, IV. 779.

AUGEAS, IV. 239.

AUGEREAU (Pierre François Charles), Marshal of France, IV. 239; X. 104 et seq Augite, XV. 81-rock, 135.

Augitic lavas, XV. 183

Augne, or auger, IV. 239.

Augneurg, IV. 239, 518—railway from,
517—diet of, XIII. 736—early printing at, XVIII. 532—treaty of, 827.

CONFESSION, IV. 240; XIII. 736; XVIII 823.

AUGUR, IV 240, 251-place in Rome consecrated to the augurs, 721.
Augury, IV 240. See Divination

August, IV. 240-gardening calendar for, XL 760.

AUGUSTA, city in the state of Maine, N A, IV. 240; XIV 99.

- city in the state of Georgia, IV 240 , X. 565

city in Sicily, IV 240; XX 244. AUGUSTALES, IV 240. AUGUSTALIS PRÆFECTUS, IV 240

AUGUSTAN AGE, IV. 240-of English literature, VIII. 714.

- Confession. See Augsburg Con-

Augustenberg (Prince), XX. 859. AUGUSTIN, or Austin (St), first bishop of Canterbury, IV. 240—Christianity introduced into England by, VIII, 656;

——— of Venice, engraver, VIII. 800.

AUGUSTINE (St), bishop of Hippo, IV. 240
—on the freedom of the will, I. 267 his doctrines and character, 325-his opinion respecting apparitions, III. 311—on beauty, IV. 537-38—on the disrepute of stage-players among the Romans, VIII 142—resolves all virtue into love to God, XV. 562—on predestination, XVIII. 478-on theology, XXI. 181 et

- (St), town in Florida, IX. 667. AUGUSTINS, order of, IV. 241. Augustoo, or Augustow, in Poland, IV.

AUGUSTULUS (Romulus), last Roman emperor of the West, IV. 241. AUGUSTUS, fort, IV. 241; XII 440

CESAR OCTAVIANUS, ROMAN emperor, IV. 241; XVI 405—reign of, XIX 830, 833—his friendship with Horace, XI. 628-mausoleum of, III. 473 -his improvements in the city of Rome, —his improvements in the city of kome, XIX. 360—Egypt under, VIII. 472—sculpture encouraged by, XIX. 558—libraries established by, XIII. 385—senate in his reign, XX. 44—Spain under, 458.

king of Poland, XVIII. 144; XIX. 478; XX. 853, 854. Auks, birds, XVI. 810; XVII. 176.

AULA, IV. 241-regia, ib. Aulacanthus, genus of fossil fishes, XVII.

Aulacocephalus, genus of fishes, XII. 276 Aulacus, genus of insects, IX. 184.
Aulastoma, genus of annelides, XI. 307.
Aulosster, town in Warwickshire, IV. 941

Auldeam, battle of, V. 406.
Auldio (Mr), his ascent of Mont Blanc, II. 628,

AULEROI, IV. 241. AULIO, IV. 241. Autrs, in Enbosa, IV 241; XXI, 418. Aulolepis, genus of fossil fishes, XII. 347. Auloporides, zoophytes, XXI. 1005.

#### ATIT-ATIS

Aulopus, genus of fishes, XII 248. Aulostoma, genus of fishes, XII 305fossil fishes, 344

Aulostomata, family of fossil fishes, XII

Aulostomidæ, family of fishes, XII 305. Aulus Gellius, IV. 241; X. 446-on the distinction between annals and history, XXI. 4.

AUMALE, town in France, IV 241. - (duke d'), governor of Algeria, II 576, X 230.

AUMONE, tenure in, IV 241. AUNCEL WEIGHT, IV. 241. AUNE, French cloth measure, TV 241. AUNGERVILE (Richard), IV 241, XIII 388. AUNIS, in France, IV 242; X. 277 Aurantiaceæ, nat order of plants, V. 185 AURAY. French town, IV. 242 AURELIA, IV 242 See Chrysalis. Aurelian road, XIX. 228.

AURELIANUS (Lucius Domitius), Roman emperor, IV. 242—reign of, XIX 349
—walls of, 362—his expedition against Palmyra, XVII. 221

AURELIUS (Victor), IV 242. See Victor - Marcus Antoninus, IV. 242; III 279

AUREOLA, IV 242. AUREUS, Roman gold coin, IV. 242; VII 68, XV 433; XVI 383. AURICH, in Hanover, IV. 242; XI. 211. Aurichalcate, mineral, XV 103. Auricle of the ear, III. 45

Auricles of the heart, III. 63 Auricula, V 203—culture of, XI. 753.
——genus of mollusks, XV 375. AURICULAR CONFESSION, IV. 242; XVIII, 226.

Auriculidæ, family of mollusks, XV 375 AURIFLAMMA, or oriflamme, standard, IV.

AURIGA, constellation, IV 242, 79. AURILLAC, French town, IV. 242. Aurochs, XIV. 214; IX. 887. AURORA, goddess, IV. 242,

BOREALIS, IV. 242; XIV 683— its electrical origin, I 738; VIII. 578 -in Greenland, XI. 42-magnetic influence of, XIV. 14, 54, 55; L 911-Dalton's views respecting its magnetism, XIV. 66, 67—in Orkney, XVI. 721— Polar regions, XVII 584

AURUM CORONARIUM, IV. 250. - MUSIYUM, IV. 250 AURUNGABAD, in Hindustan, IV. 250.

AURUNGZEBE, Mogul sovereign, IV 250; III. 746; XI 479 — mosque of, at Benares, IV 644. Ausa, lake of, II. 40,

Auscultation, IV. 250; XIII. 150, 151. Ausenses, IV. 250. AUSONIA, IV 251.

Ausonius (Decimus Magnus), IV. 251fishes, XII. 239, 240, 242, 254, 256. AUSPEX, IV. 251. See Augur. Ausserhoden, in Switzerland, IV. 251.

AUSTEN (William), IV 251.

(Captain Horatio), his northern expedition, XVIII, 178.

(Godwin), granite boulder described by, XV. 215, n.—on pleistocene fossil mammalıa, 216.

—— (JANE), novelist, IV, 251—her novels, XIX. 279. AUSTER, IV 251.—battle of, V. 599;

X. 139-Pont d'Austerlitz, XII. 581. Austin (Prof.), on federal government, IX. 497,

AUSTLE (St), Cornish town, IV. 251.

Austral islands, XVIII. 281.
AUSTRALASIA, IV. 251—British colonies in, VII. 147—evidences of volcanic action in, XVII. 590-map of, IV. Pl. See Australia, New Holland, New Zealand, &c.

AUSTRALIA, OF New Holland, IV. 270, 252—successive explorers of, 252-258; VII. 340, X. 474, 475—general view of, IV. 258 - aborigines, 258-natural history, 260-brutish condition of the

#### AUS-AUV

aborigines, L 450—claims of, to self-government, V 671, 672—emigration to, VIII. 650, XXI. 677—trade with England, VIII. 732, 733; Liverpool, XIII. 518-insects of, IX. 69-deserts of sand in the interior of, XV 150metallic produce of, 248 — gold districts of, 232—copper mines of, 238— Mutual Provident Society of, XII 413— fossil animals of, XVII 174—former volcanic agency in, 590-mountains of, 600 —their height, 646—rivers, 608—flora of, 629; V 229—mammalia of, XIV 174 et seq.; XVII. 631-birds, 633, 634number of serpents, 634-prevalence of marsupial animals, both recent and fossil, 638—supplies of gold from, XVIII. 463—wages in, 467—presbytenamsm m, 492—convicts m, 576 et seq reptiles, XIX. 31 et seq—duration of voyage from Britain to, XX. 19—timber trees of, 173, XXL 278-weights and measures of, 810—imports of wool from, 911; prices of, 912—culture of the vine in, 882, wines of, 887—exports to, from America, 427-map of, IV. Plate

AUSTRALIA (South), IV. 293 - (WESTERN), IV 298 Australian Colonies Act, XXI 33.

AUSTRIA, IV 302, IX. 401—army of, III 644—Joseph II.'s plan for exchanging the Austrian Netherlands for Bavaria, V. 516 - designs of, against France in 1791, 540—mercantile policy of, VII. 194 — value of the produce of its mmes, XV. 248 — crown of, XI 335—war with France in 1809, X. 151; in 1813, 162—newspapers of, XVI 201—heights of mountains, XVII. 642, 643 - trade with France, X. 259 —her Italian possessions, XII. 634; XIII. 643—wars in Italy, XII. 653 et seq -annual production of coal in, VII. 126-law of copyright in her Italian states, 359—stereotyping in, XVIII. 552—work on the plants of, in nature printing, 555 — registration of births, &c., in, 842 —coins, XV. 441, 443 — railway statistics, XVIII 787 postal system, 424—insurance offices in, XII 413—operations against Hungary in 1849, 24, 25—iron ores of, 541—wars with Prussia, XVIII. 652—production of the precious metals, XV 248-war with Sardinia in 1859, XIX. 648 et seq -savings-banks in the German provinces of, 674-dominion in the Two Sicilies, XX. 264 - silk produced in, 278-conduct of, in regard to the slave trade, 323-war with Sweden, 850-Austrian rule in Switzerland, 884proportion of suicides in, 800-weights and measures of, XXL 809-war with Turkey, 370—wines of, 885—universities

of, 492—map of, IV. Plate. Authors, Lombard king, XIII. 689; XII. Authenticity of the Scriptures, XIX. 829.

Authors, their copyright, VII 855—dra-matic, XXI 172; their emoluments, ib.,

Autobiography, IV. 725. AUTOCHTHONES, IV. 820. AUTOCRAT, IV. 320,

AUTO DA FE, IV 320; II. 116; XII. 390. AUTOGRAPH, IV. 320. Autography, in hthography, XIII. 512.

AUTOLYCUS, ancient robber, IV. 320. - astronomer, IV. 320; III. 789.

AUTOMATON, IV. 320; III. 137. Automolite, mineral, XV. 87. AUTONOMY, IV 320.

Autos sacramentales, VIII. 145—Calderon's, VI 72.
AUTUMN, IV 321.

AUTUMNAL EQUINOX - point -signs, TV. 821.

AUTUN, IV. 321.

AUVERGNE, in France, IV. 321; X. 277—extinct volcanoes of, IX. 384; XVII. 589, 596-culture of the vine in, XXI.

#### AUV-AVI

Auvernas, wine, IV 321. AUXERRE, in France, IV. 321; XXI. 955. AUXESIA, IV. 321. AUXESIS, IV 321.

AUXILIARY, IV 321.

- VERBS, IV. 321; X. 765, 793; XIII. 189, 191

Auxis, genus of fishes, XII. 296. AUXONNE, city in France, IV. 321. Auzout (M.), his micrometer, XIV 743his pneumatic experiment, XVIII 25-

telescope made by, XXI. 119. Ava, capital of the Burman empire, IV 321; V. 779 et seq.; XVII 367guage of, XIII. 206—production of the precious metals, XVIII. 461—printing press at, XIII 206

AVADOUTAS, sect of Indian Brahmins, IV 322

AVAL, or Awal, IV. 322; III 343. AVALANCHE, IV. 322—in the Alps, II 625—in the Caucasus, VI 341—not found among the Andes, III. 130

AVALLON, in France, IV 322, XXI, 955. Avanturine, mineral, XV 69.

Avance, not an original principle of human nature, I 382-a vice of the Duke

of Marlborough, VI. 715. AVATAR, IV. 322; XI. 468. AVATOHA, a bay, IV. 322.

AVEBURY, village in Wilts, IV. 322-Celtic burrow at, XXI 879.

Averro, Portuguese town, IV 322 AVERON, or Aveyron, IV 322, 328 AVELLA, town of Naples, IV 322; II. 27. AVELLINO, Neapolitan city, IV 322. AVE-MARIA, IV. 322

AVENA, a genus of grasses, IV. 322 spikelet of, V. 113—flower, 125 AVENBRUGGER (Leopold), physician, IV. 222

AVENCHES, Swiss town, IV 323 AVENOR, in feudal law, IV. 323 AVENTINUS (Johann Turmayr), IV. 323 MONS, one of the seven hills of Rome, IV. 323; XIX. 356, 357.

Aventurine felspar, XV. 71. AVENUE, IV 823, XVII. 778, 775. AVENZOAR, Arabian physician, IV. 323; XIV 457—his surgical skill, XX. 815 AVERAGE, IV. 328; XII. 428.

Averages, determination of meteorological XIV. 664.

AVERNUS, now Averno, lake, IV. 327; XII. 637, XV. 779; XX. 239. AVERBOES, Alabian philosopher, IV. 327; III. 795; XIV 457; XV. 306; XX.

816. AVERRUNCI DEI, IV. 328 Aversa, Italian town, IV. 328. Aversion, XIX. 111, 112, 116. Avcs, fossil, XVII. 154. AVESBURY (Robert of), IV. 328. AVESNES, in France, IV. 328 AVESTA, village in Sweden, IV. 328. AVESTAON, IN France, IV. 328—river, XXI.

Avezzano, town in Naples, IV. 328. AVIANUS (Flavius), IV 328 AVIARY, IV. 828.

AVICENNA, Arabian physician, IV. 328; XIV. 456; XV. 306—his surgical skill, XX. 815

Avicula, genus of mollusks, XV 347, 348
Aviculidse, family of mollusks, XV 348
fossils, XVII 106

AVIENUS (Rufus Festus), Latin poet, IV 329

AVIGLIANO, town of Naples, IV, 329. Avignon, in France, IV. 329; XXL 530 -population, X. 277.

AVILA, Spanish city and province, IV. 329.

- (GIL GONZALEZ D'), Spanish author, IV. 329.

Avries (San Nicolas d'), Spanish town, IV. 329.

Avilez (Melendez d'), founder of St Augustine, XXI. 432. Avis, house of, Portuguese dynasty, XVIII.

Avison (Charles), IV. 330. Avisse, a blind French author, IV. 780.

#### AVI—AYT

Aviz, Portuguese town, IV 330. Avlona, town in Albania, IV. 330. Avocets, birds, XVI, 806

AVOIRDUPOIS WEIGHT, IV. 330-table of, III 584, XXI. 808 - articles sold by, 807.

Avola, Sicilian city, IV 330

Avon, name of three English rivers Upper Avon, IV 330, XVI 297; X. 681; XXI 738, 879-Lower Avon, IV 330, XX. 410; XXI 879—Avon, in Hampshire, IV 330; XI 203.

AVRANCHES, in France, IV. 330. Avravanel (Isaac), II 46.

Avrilly (Chanome d'), his entomological work, IX. 21.

Awadh, ancient city in Oude, XVII. 18 AWARD, in law, IV 330. Awe (Loch), IV. 330; XIX. 794-trout of,

III. 156, 157. Ax. See Acqs and Dax. Axamenta, IV. 330.

Axan, VII 316. Axayacatl, Mexican king, XIV. 702 AXBRIDGE, town in Somerset, IV. 330 AXE, IV. 330

- Ladies of the, Spanish order, XIII.

- river in Somersetshire, XX, 410. Axel, Dutch town, IV. 330 AXHOLM, island, IV 330.

AXILLA, IV. 331; III 1-axillary flowers, V 114

Axim, town in Africa, IV. 331. Aximite, mineral, XV. 86-its pyro-electricity, VIII. 560 AXINOMANCY, IV 831.

Axinurus, genus of fishes, XII 304 Axinus, genus of mollusks, XV. 349-fossil, XVII. 105, 106

Axiom, IV. 331—geometrical axioms, X. 508, 509, 517, 530; XIV. 598—logical axioms, XIII. 572, 575, XIV. 597

Axis, in geometry, &c, IV 331, 1; X.
480—in zoology, XIV. 209—in mechanics, 387, 388, 389 (see Rotation) one of the vertebræ, III 5 - of the eye, 95; XIII. 461-of plants, V. 76, 78 et seg.

Axius, river, IV. 331; XI. 11. Axle, wheel and axle, XIV. 388-hollow preferable to solid axles, XX. 778-degree of resistance of, ib.

AXMINSTER, town in Devon, IV 331. - carpets, VI. 271.

Axolotus, genus of reptiles, XIX. 84. Axum, old capital of Abyssinia, IV 331; II. 56.

Ay, or Ai, French town, IV. 331 - wines of, XXI 883. AYACUCHO, plain in Peru, IV. 331; XVII. 474—battle of, IV 819, XVII 468.

AYAMONTE, Spanish city, IV. 331. Aye-aye, animal, XIII 791; XIV. 179-

dentition of, XVI 455 AYEEN-AKBERY, IV 331. Aylen (Mr), his anchor, III 119—his mode

of anchoring a ship when out of soundings, 118, VI. 225.

AYLESBURY, town in Buckinghamshire, IV. 331; II. 429—vale of, V. 722. AYLESFORD, village in Kent, IV. 331 AYLMER (John), bishop of London, IV.

AYLSHAM, town in Norfolk, IV. 332. Aymestrey limestone, XV. 198. Avora, Spanish town, IV 332. AYR, town, IV. 332-river, 1b. - NEWTON UPON, IV 332.

of. 832, 333

Ayres (Sir John), VI. 626. AYBSHIRE, IV. 332-breed of cattle, IL. 342—cow, its excellence for the dairy, VII. 621—agricultural statistics, XIX. 796, 797, 798-population, 799-Cheddar system of cheese-making introduced into, XXI 864-trigonometrical survey

- Agricultural Association, their report on cheese-making, VII. 625. AYRY, or Aery, IV. 883. AYSOUE (Sir George), IV. 333; V. 422. Aysgarth Force, waterfalls of, XXL 957. AYTON (Sir Bobert), IV. 334.

#### AYT—BAB

Arron, in Berwickshire, IV. 334. Ayur Veda, Hindu medical work, XIV. 450.

AZAMOR, town in Morocco, IV 334 AZANI, ancient city of Phrygia, IV. 334. Azara, IV 334 See Azzara AZARIAH, king of Judah, IV. 334 AZERBIJAN, in Persia, IV. 334.
AZIMUTH, IV 334; 1—use of, in the trigonometrical survey, XXI. 336

- CIRCLES, IV 334. COMPASS, IV 334: XIV. 79. dial, VII. 792

magnetical, IV. 334. Azoga ships, IV. 334.

AZOPH. IV. 334. - sea of, IV. 334.

Azores, islands, IV. 335; XVIII. 382 height of mountains in, XVII. 644. AZOTE, IV 337 See Nitrogen.

Azotized and unazotized constituents of plants, V 94, 95 Azorus, city of Palestine, IV. 337

AZPEITIA. Spanish town, IV. 337. Azpilcueta (Martin de), III. 762 Aztecas, XIV 699

AZTECS, IV 337; II. 683, 684, 696—their skill in spinning cotton, XIV 717. AZUNI (Domenico Alberto), IV. 337. AZURE, in heraldry, IV 337, XI 324. Azurte, mineral, XV. 73, 102 AZZARA (Don Felix de), naturalist, IV. 337, XVI 732 and n 2—on the vam-

pire bat, XIV. 149. - (Don Jose Nicolas de), IV. 337

#### В

B, letter of the alphabet, IV. 338-in abbreviations, II. 17-the most frequent mittal letter of English surnames, XVIII 836.

BAAL, IV 338--worshipped by the Phœnicians, XX. 906.

BAALBEC, ancient Syrian city, IV. 338-ruins of, III 470; XX. 910 BAAL-BERITH, IV 338.

BAAL-PEOR, IV. 338 BAAL-ZEBUB, IV. 338.

Baba, Cape, IV. 340. Babatac, Turkish city, IV. 340. Babbage (Charles), his works on Life Contingencies and Assurance Institutions, III 223—misled by a table in Morgan's work on Life Assurance, 1bhis calculating machines, I. 880—on magnetism, XIV. 10, 32, 33, 35—on the deposits of rivers, XV. 140-his calculation of life assurance, XII. 403-on the fallacy of Hume's argument on miracles,

XVIII. 612 - (Mr), his discoveries in Australia, XXL 315.

BABEL, IV. 340-the confusion of tongues at, VII. 245-most likely not a confusion of language, but a dissension about religious worship, I 466
BABELMANDER, strait of, IV. 340.

Baber, founder of the Indian Mogul or Tatar empire, IV 340; II 208; III. 746, XI 478—site of his tomb, VI 48 -translation of his Memoirs by Dr Leyden, XIII. 335.

Babinet (M), on optics, XVI. 550, 667, 669, 692

Babington (Gervase), bishop, IV. 340.

(C), his edition of an oration of Hyperides, XII 192.

(Dr), on the oil of the blood, II. 781. Babingtonite, mineral, XV. 82.

Babington's conspiracy, XIX. 788. Baboon, IV 340; XIV 140, 141. Babrius, a Greek fabulist, IV. 340. BABYLON, IV. 840-ruins of, III. 438-

history of, 741—taken by Alexander, XIII 768—walls of, IX. 814—paintings at, XVII. 46-Jewish captivity at, XII. 767—Jewish patriarchate of, 775-76— bricks of, V. 342; XVIII. 431—school of Jewish learning at, XVII. 521-

#### BAB—BAC

sculpture at, XIX. 846-Rich's explorations of, 157.

Babylonia, or Chaldma, IV. 345. See Chaldea. Babylonian monarchy, XI. 542; XV. 412

-hours, VII. 796.

Babylonian, or astrologer, IV. 847.

Talmud, XXI 15, 16. BABYLONICA TEXTA, IV. 347 Babyrussa, in zoology, XIV. 197.

BACCALAUREATE, IV. 347. BACCARAT, a French town, IV. 347. Baccha, genus of insects, IX. 239.

BACCHÆ, priestesses of Bacchus, IV. 347. BACCHANALIA, festivals in honour of Bacchus, IV. 347.

BACCHIGLIONE, river, IV. 347.

BACCHIUS, ancient Greek author, IV. 347. BACCHUS, IV. 347; XVII. 3-mysteries of, XV. 753 — found by Acœtes, II. 95— espoused to Ariadne, III. 527—statue of, VIII. PL CCXI.

BACCHYLIDES, Greek poet, IV. 348. BACCIO, or Baccius (Andrea), physician,

DELLA PORTA (Bartolomeo), painter, IV. 348.

Bace (J Sebastian), musician, IV. 349; XV. 729.

(C P. EMANUEL), IV. 349; XV. 729 (M), his work on insects, IX. 23. Bachaumont, Mémoires de, XVI. 198. Bache (Prof), on the depth of the basin

of the Pacific, XVII 575 Bachelier (M.), on encaustic painting, VIII 684.

BACHELOR, IV. 349; XXI. 447 and n. 2taxed in Rome, II. 185-number in Britain, VIII. 756 - degree of bachelor, IV. 349; XXI. 448, 458 et seq.—knights-bachelors, IV. 349; VI 619.

Bachian, island, IV. 349. Bachoffner's plan for preventing smoke in grates, XX. 854

BACILLARIA, family of infusoria, IV. 849; III. 211, XVII. 94, 95

Back (Sir George), on the magnetic influence of the aurora, XIV. 15, 55, 56 his arctic expedition of discovery, XVIII. 171, 172.

- Bay, in Timcomalie, XXI. 350 how to swim on the, XX. 880-sprain of, in animals, XXI 560. of birds, III 84.

pressure, in steam-engines, XX. 600, 619

raking, in veterinary science, XXL

RENT, TV. 351. STAFF. IV 351 BACKER (Jacob), painter, IV. 349. BACKERGUNGE, in Bengal, IV. 349. BACKGAMMON, IV. 349. BACKHUYSEN (Ludolf), painter, IV. 351. Bacmeister, on the Imperial library of

St Petersburg, XIII. 425. Bacon (Francis), Viscount St Albans and Baron Verulam, IV. 851—his outline of the various departments of human knowledge, L 1-his classification of the arts and sciences according to a logical division of our faculties unsatisfactory, 5, 6-his attempt at this, however, productive of great benefits, 7his estimate of Paracelsus, 18—his ments as the father of experimental philosophy, 32-his definition of poetry, 33-the precision and accuracy of his ideas on topics connected with the philosophy of mind, ib .- on the mutual influence of thought and language on each other, 34-his sagacious views on universal grammar, ib - his adoption of some of the prevailing prejudices of his day; among others the erroneous notion that the faculties of man are declining, as the world grows older, 35 -his ethical disquisition almost entirely of a practical nature, ib -character of his Essays, 36—on philosophical juris-prudence, ib—his distinction between "deep and vulgar laws," 37—his notions with respect to commercial

# BAC-BAC

policy specially erroneous, ib - the paramount importance attached by him to the education of the people, 38 -his ments failed, for a century and a half, to attract general attention, 38 -his works little read in France till after the publication of D'Alembert's preliminary discourse, 56-his philosophical fame in this country may be dated from the establishment of the Royal Society of London, 241—Condor-cet's estimate of his powers, 56—character of, by Ben Jonson and others, 239, 240—on human reason, 58—his admiration of the Epicurean physics, 71—analysis of his Novum Organon, 570 et seq, 586 et seq — low state of physics in his time, 570—on the causes of vagueness and sterility in all the physical sciences, 1b -causes of error enumerated under four heads called "Idols," 571, 572—does not charge the ancients with being absolutely regardless of experiment, 572-reduces the periods during which science had been cultivated to three, Grecian, Roman, and that of the western nations after the revival of letters, 573-considers the end and object of knowledge to have been very generally mistaken, ib.
—reverence for antiquity has retarded the progress of science, ib physical laws the most important for us to understand, 574—the nature of induction, ib -classes all learning relatively to memory, reason, and imagination, ib.-distribution of knowledge under these heads, 575-his views of natural history, ib - explanation of the latent process, and the latent schematism, ib -method of exemplifying the process of induction relative to the form or cause of anything, 576 garded his method as applicable to all investigations where experience is the guide, ib .- all facts not of equal value in the discovery of truth, 577-enumeration of twenty-seven species of facts, or ustantia, with examples, ib., 578 et seq-quotation from, on those experiments which most immediately tend to improve art by extending science, 583—remarks on philosophical instruments, ib.-sagacious conjectures regarding light which have been since verified, 584—general estimate of his genius, ib.—Hume's comparison between him and Galileo, 585-his superiority to Galileo as well as to all other philosophers, 586—the perfec-tion which he ascribed to philosophy may never be attained, 590—his views on heat less intelligible than those of Aristotle, 756-his confused ideas on aëronautics, IL 169-on the nourshment of plants and animals, III. 179his philosophy compared with Aristotle's, 538-39, 542, 551-treats Aristotle mijusty, 556—on the balance of power, IV. 388—on heat, XI. 260—his divi-sion of human knowledge, 536—on the compressibility of water, XII. 77 on knighthood, X.III. 110-on mnemonics, XV. 285-on the knowledge neces sary to cure law of its defects, XIII. on Machiavelli's Prince, 782, n. 5, 783—a reformer in education, XV. 809 on the topiary art, XXI 311-his idea of a trade museum, 322.

BACON (John), founder of the British School of Sculpture, IV 357; XIX 867.

- (Sir Nicholas), IV. 358. - (Roces), IV. 358; XIV. 458—his claim to the respect of posterity, I. 570-pursued the path of true philosophy amidst ignorance and error, 623his diligent study of optics, ib.; XVI. 524—his knowledge of the use of lenses, ib.; XIII. 449—his fondness for the marvellous, 624—on the art of flying, IL 166-hs ignorance of the denary notation, III. 581-the inventags of gunpowder erroneously ascribed

# BAC-BAG

to him, ib. n , XL 150-on astronomy, III. 796-on the calendar, VI. 82-on the rainbow, XIV. 679-his knowledge of geometry, X 504 Bacon, curing of, VIII 288; IX 761, 762

BACONTHORP (John), IV. 358. Bactishua (George), physician, XIV 456
Bactila, now Bokhara, IV 359, 395;
V. 757—coins of, XVI 390

BACTRIS, genus of American palms, IV 359

Bactrites, fossil mollusks, XVII 112. BACULARIUS, IV 359.

BACULE, in fortification, IV. 359 Baculites, genus of mollusks, XV. 394, XVII 113

BADAJOS, IV 359, IX 339-siege of, V. 609, 611, IX. 825-Wellington repulsed at, XXI. 824 capture of, by Wellington, 825

BADARSHAN, or Buduschan, IV. 359 BADALOCCIO (Sisto), IV. 359 BADALONA, Spanish town, IV. 359. Baddeley (Mr), on the means of escape from fire, XIII. 435

on dust-storms, XIV 685 BADEN (Grand Duchy of), IV 359-army of, III. 652-coins of, XV 443-postal system, XVIII 424-weights and measures of XXI. 810-universities in. 492.

or Baden-Baden, IV 361. a Swiss town, IV. 361. an Austrian city, IV 361

-Weiler, in Baden, IV 361 BADENOCH, IV. 361; XII 438 BADENS (Francis), painter, IV 361. Badge, XIII 524, XI 338 BADGER, IV 361, XIV 155; XXI 548-

its power of enduring want. III 180dentition of, XVI 462-its hair and fui, X. 349.

Badham (G D.), his works on insects, IX.

BADIA Y LEBLICH (Domingo), Spanish traveller, IV. 361.

BADHE (Antonio), painter, IV 361. Badis, genus of fishes, XII. 277. Badister, genus of insects, IX 94 Badius (Jodocus or Josse), printer, IV. 361 Badku, IV. 381

BÆNA, Spanish town, IV. 361. BADTICA, in Spain, IV. 361; XX. 458, 459. BÆTYLIA, IV. 361.

BAEZA, in Spain, IV 361 (Becerra de), painter, XVII. 75.

BAFFA, town in Cyprus, IV. 362; XVII. 261

BAFFIN (William), mavigator, IV 362; XI. 40; XVIII. 168. BAFFIN'S BAY, IV. 362; XVII 576

BAFRA, town of Asia Minor, IV. 362 Bagarius, genus of fishes, XII, 262. Bage (Robert), his novels, XIX. 278 Baggesen (Jens), Danish author, XIX.

BAGHDAD, IV. 362-cultivation of science at, under Almannun and the Abassides, II. 597, 755; III. 794-the khalifs of

a Turkish pashalic, IV. 364. Baghelcund, Indian state, XIX 100. BAGHERMI, African country, IV. 864; II 229-partially explored by Dr Barth,

BAGLIVI (Giorgio), Italian physician, IV.

BAGMUTTY, river, TV 364, 367 BAGNARA, Neapolitan city, IV. 364 BAGNERES-DE-BIGORRE, in France, IV 364 - DE-LUCHON, in France, IV. 365.

Bagnes, places for convicts in France, XVIII. 575—at Brest, V. 316; Toulon, XXI. 317. Bag-nets, for fishing, IX. 617, 610, 627.

BAGNOLES, French village, IV 365. Bagnors, French town, IV. 365. Bagous, ganus of insects, IX. 140. Bacerre, IV. 365; XVII 714, Bagoation (Prince), X. 154, 155, 157, Bagrationite, mineral, XV. 90. Bagms, genus of fishes, XII. 261. Bagshot eccene rocks, XV. 212 Bagster's Polyglot Bible, XVIII. 266.

### BAG-BAI

Bagtchi-Serai, in the Crimea, VII 503 BAHAMAS, Or Lucayas, Islands, IV. 365; XXI 837

BAHAR, in Hindustan, IV 367, 651. BAHAWULPOOR, in Northern India, IV 367 Bahra, province, IV 367, V 287—cli-mate of, 293—population, 295

- town, foundation of, V 281-taken by the Dutch, 282-commerce of, 299. BAHIR, IV. 367

Bahráich, town in Onde XVII 18. BAHREIN, islands, IV. 367—pearl fishery of, XVII 357, 444

— province of Arabıa, III 341, 343 Bahr-el-Abyad See Abıad, Bahr el. Bahr-el-Azrek, II 55, 214, V. 689; XVI 269, XVIL 607; XX 51.

Bahı-es-Saffi, sand gulfs of, III 357-8. Bahı-Yoosuf, canal, VIII 430 BALE, in Italy, IV 368; XX 240. BAIBOUT, Turkish town, IV. 368. BAIER, or Bayer (Gottlieb Siegfred), IV.

BAIRAL, lake, IV 368; XIX. 549 Ban, in law, IV 368 BAILEN, Spanish town, IV. 368.

BAILEY (Nathan), IV 368.

on syllogisms, XIII 624. (Rev. R. R), on the operation of the poor-laws, XVIII 313, n. 1. Bailie, IV 368.

BAILIFF, IV. 368 Bailii, or Bailly (David), painter, IV. 368. BAILIWICK, IV. 369.

Baillarger (M), on epilepsy, XIV 536 Baillet (Adrien), IV 369—on pseudonymous books, 711.

BAILLEUL, ancient French town, IV, 369 Baillie (Colonel), XI. 492

———— (JOANNA), IV. 369—as a drama-

tist, VIII, 168

(General), defeated by Montrose, V. 406.

- (Dr Matthew), IV. 369. - (Robert), IV. 370

Banlly (Jean Sylvain), IV. 273—his esti-mate of Leibnitz's philosophical character, I 262-his views on the antiquity of Indian astronomy, II. 488, III 786—his eulogium on Clairaut, I 783—on mesmerism, XX. 419

BAILMENT, IV. 375.

Baily (Francis), IV. 375; I 852-founder of the Astronomical Society, ib -his writings on eclipses, ib -his star-catalogues, 1b; IV. 95 -his astronomical papers, III. 816-on the motions of the fixed stars, IV. 83-on the pendulum, I. 852; IX. 573-his repetition of Cavendish's experiment on the earth's density, I. 835, 853-results obtained by him as to the earth's oblateness, 853on life annuities and assurances, III. 222; XII 400

Barn (A. G.), fossil reptiles discovered by, XVII. 142, 143

(Mr), his electric telegraph, VIII. 544, I. 986; XXI 101, 106-his receiving instrument, 107-transmitting apparatus, ib —his electric clock, I. 986;

BAINBRIDGE (Dr John), IV. 875. (Mr), on angling, III 150 et seq. his Fly-Fisher's Guide, 164

Baines (Edward), XVI. 186, XXI. 958his estimate of the production of wool in United Kingdom, 907-his estimate of the woollen manufactures, 918-his report on the rate of wages in the

Leeds woollen district, 919. Baiolensians, sect of heretics, IV. 875. Bairacter (Mustapha), XXI 372, 878. BAIRAM, Mahometan feast, IV. 375.

BATRO (Sir David), IV 375; XXI 818, 821-Cape of Good Hope taken by, X.

(Dr), on the medusæ, XXI. 998on physales, 999 BAIREUTH, in Bavaria, IV. 376.

BAIROUT, or Beyrout, Syrian town, IV.

Bait-fishing, III. 148-for trout, 155-for pike, 159,

# BAI-BAL

BAITING, IV. 376. BAIZE, IV. 376.

Bajarzid, Turkish city, IV 523.

BAJAZET I., sultan of the Turks, IV 376; VII. 320; XXI 368—defeat and treat-ment of, by Timur, XXI. 283. II, sultan, IV 376—his reign, XXI.

Bajee Rao, prince of Poonah, XI 507. Bajulus, IV. 376.

Bakel, forts on the Senegal, XX. 49.
BAKER, IV 376—diseases of bakers, XIV. number in London, XIII 660.

- (Henry), IV 376-on animalcules, III 199, 202-on the stickleback, XII.

(Sir Richard), IV. 377.

(THOMAS), mathematician, IV. 377. (THOMAS), antiquary, IV. 377.

(Mr), on the number of mill operatives in Leeds, XIII 313-on the statistics of Leeds' woollen manufacture, XXI. 919

BAKEWELL (Robert), agriculturist, IV. 377: XIII. 320-his improvement of live stock, II. 263-produced the Leicester

breed of sheep, 345, XIII 320
—— (M1), his travels in the Tarentaise. XIX. 587

town in Derbyshie, IV. 377—chalybeate spring at, VII 755
Bakewellia, fossil mollusks, XVII 106
BAKING, IV 378—of pottery, XVIII. 441
—of meat, IX. 766—of timber, XXI.

Bak-thian, Chinese city, VI 49. Baku, or Badku, IV 381

Bala, town in Wales, IV. 382, XIV 544
—lake of, 543—cambro-silurian 10cks
of, XV. 196,

Balaam, IV. 382. Baladan, IV 382

BALENA, IV 382; XIV. 233. See Whale. Balænodon, fossil whales, XVII, 165. Balænoptera, jaw and baleen-plates of,

XVI. 442. BALAGHAUT DISTRICTS, IV. 382. Balagny, VI. 626

BALAGUER, Spanish city, IV 382. Balaklava, in the Crimea, VII. 505; IV. 744-battle of, XIX. 504

BALAMBANGAN, island, IV. 382.

BALANCE, IV 382; XIV 415; XX 541-Chinese, IV. 385-Danish. ib-bent level, 1b —hydrostatic, 386—of torsion, ib ; VIII. 549 , I. 835, 873, 988-statical, IV. 452—electrical, VIII. 624—magnetic, XIV. 43.

in watch-work, VII. 29—com-pensated balances, ib.—Dent's compensation, 31-Loseby's mercurial, ib-Dent's prismatic, ib.—Eiffe's compensation, 30.

OF POWER, IV. 387, V. 538, 586 -M1 Fox on, 526.

- of trade, IV. 392; XVIII. 214. - of a constitution, VIII. 384.

sheet, in book-keeping, V. 27. Balanidæ, fossil, XVII. 101. Balaninus, genus of insects, IX. 140.

Balanophoraceæ, nat order of plants, V. 209.

Balanus, genus of cirripedes, XV. 319. Balas Ruby, IV. 392; XV 87. Balasinore, town in Western India, IV.

Balason handkerchiefs, manufacture of, VII. 449

Balasore, town in Hindustan, IV. 392. BALATON LAKE, IV 898; XII 10-peculiar fish of, 17.

Balbi (Adrian), geographer, IV. 393 Balboa (Vasco Nuñez de), IV. 393; X.

472; XVII 462 BALBRIGGAN, Irish sea-port, IV. 393; VIII. 214, 216,

Balcarce (General), IV. 832

Balconies, III. 488.

Bald (William), on the use of diving bells in the Clyde, XVI. 70—on the weight of deposits from the bed of the Clyde,

BALDI (Bernardino), IV. 398.

#### BAL-BAL

BALDINGER (Ernst Gotfried), IV. 393 BALDINUCCI (Filippo), IV 393. Baldo (Guido), XX. 30 See Ubalda. BALDOCK, town in Hertford, IV. 393.

(RALPH DE), bishop, IV. 393. Baldoon, in Wigtownshire, XXI. 863, 864 BALDRICK, IV 898. BALDWIN (Thomas), archbishop of Canter-

bury, IV. 393. the name of nine counts of Flan-

ders. IV. 394.

emperor of the East, VIL 318, 526 kings of Palestine, XVII. 196. BALE (John), bishop of Ossory, IV 394.

XXI. 165-his commendation of Bellenden, IV 635-on libraries, XIII. 389. BALEARIC ISLANDS, IV. 394; XIV 102 BALECHOU (Jean Jacques Nicolas), IV. 394.

BALEN (Hendrick Van), painter, IV. 394. BALES (Peter), IV 394 BALEY (Walter), physician, IV 394.
BALFOUR (Sir James), president of the
Court of Session, IV 394; XX 313.

- (Sir James), IV. 394-his MSS. XIII. 401.

- (ROBERT), IV. 395.

- (Prof.), on the number of plants, XVII. 625-on the equatorial zone of vegetation, 626—on the botany of Scotland, XIX. 811, 795.

BALFROOSH, Persian town, IV. 395. BALGUY (John and Thomas), IV 395 BALHARRY, in Hindustan, IV. 395. Ball, or Bally, one of the Sunda Islands, IV. 395.

Balinger, kind of vessel, XX. 123 Ballot, or Balliol (Sir John de), IV. 395. Balistapus, genus of fishes, XII. 313. Balistes, genus of fishes, XII. 312, 313-teeth of, XVI 421, 422

teeth of, XVI 421, 422
Ballstida, famlly of fishes, XII 313.
Balltora, genus of fishes, XII 258.
BALIZE, IV. 395, XI 609.
BALK, or Balkh, IV. 395
— ruins of, IV 396

Balkan, mountains, IV. 396; IX. 383; XVII 596, XXI. 376, 377—height of, XVII 642.

- gulf of, VI 311 Ball, printers, XVIII. 546, 547.

(Mr), on the soil and situations fitted for the tea-plant, XXI. 84-on

tea, 86 et seq. BALLAD, IV 396—Spanish, XVIII 112; XX. 494-ballad poetry of Scandinavia, XXX. 691.

Ballaghkeen (North and South), baromes in Wexford, XXI. 846

Bailanophyllia, fossil corals, XVII. 97. Ballantyne (James and John), their connection with Sir Walter Scott, XIX. 821,

Ballantyne's salve for sheep, II. 351 Ballarat, gold diggings at, IV 289— largest mass of native gold yet found at, XVII. 622.

Ballard (M1), on the flow of water over weirs, XII. 121, 125,

BALLAST, IV. 397.

BALLATER, village in Aberdeenshire, IV.

BALLENDEN (John), IV. 397. See Bellenden.

BALLENSTEDT, IV 397.

BALLET, IV. 397; VII. 646.

Ballina, town in Ireland, IV. 398; XIV 372.

Ballinacor (North and South), baronies m Wicklow, XXI. 859.

Ballinaminch, in Ireland, IV. 898-mineral waters near, VIII. 122.

Ballinaslor, Irish town, IV. 398—its cattle fair, XIL 519; X. 391; IX. 468,

X1X, 429, BALLINROBE, Irish town, IV. 898; XIV.

Balliol (John), XIX. 754. - College, Oxford, XVII, 35; XXI.

BALLISTA, military engine, IV. 398. BALLISTEA, IV. 398. BALLISTIC PENDULUM, IV. 398; XI. 111, BALLISTRARIA, IV. 399.

# BAL-BAM

Ballium of a castle, VI 327 Ballochmyle viaduct, over the river Ayr, XVIII 763, 764.

BALLOON, IV 399-ascent of Biot and Gay-Lussac, I 939—invention of, by the Montgolfiers, II 173—first public ascent of a, 174-useful purposes for which balloons may be employed, 184-true theory of, 170-buoyant force of, ibcelerity of their ascent, 171-stability of their suspension at a given height, 172 employed in war, X 93, n. 2, II 180; XI 165-smoke balloons, II 171-72-gases best fitted for, VI. 458ascents of Messrs Green, Rush, and Welsh, XIV, 640-observations on the decrease of atmospheric temperature derived from balloon ascents, 642. chemical vessel, IV 399.

kind of game, IV. 399 BALLOT, IV 399—its successful operation in Tasmania, XXI 33 Ballston, town in New York, IV. 400. BALLYBAY, Irish town, IV. 400 BALLYCASTLE, Irish town, IV. 400. BALLYMENA, Irish town, IV. 400 BALLYMONEY, Irish village, IV 400 Ballymore, in Ireland, most at, XXI 840 Ballynahinch, river and lake, X. 389 BALLYSHANNON, Irish town, IV. 400, VIII

Ballyspellan, mineral spring at, XIII 85. Balm of Gilead, IV 400.

of Mecca, IV 401 tree of Arabia, III 344 of Gilead fir, V 209.

Balnaves (Henry), IV 402.

Balma (Jacques), ascent of Mont Blanc by, II. 627.

BALMERINO, in Fife, IV. 402. BALMEZ (Jayme Lucien), IV. 402.
BALMORAL, residence of the queen in
Aberdeenshire, IV. 402, II. 34.

Balnearii Servi, IV 402 Balognes, IV. 402. See Valonges BALSAM, IV 402-of Copaiva, V. 190, VII 345—of Umiri, V 187—of Peru, 190— of Tolu, 1b—of Jericho, XVII. 187

Balsamıfluæ, nat order of plants, V 207 BALSAMINEÆ, or Balsaminaceæ, nat. order of plants, IV. 402; V. 188

Balsamo (Joseph), impostor, VI. 59. BALSAMODENDRON, genus of plants, IV. 402; V. 190

Balsham (Hugh), founder of St Peter's College, Cambridge, XXI. 461, 465 Balsora. See Bussora.

BALSOVER, or Bolsover, IV. 402, 839. Balta, Russian town, IV. 402
Baltic Sea, IV. 402; IX. 385; XVIII.
662—specific gravity of its water, XVII.

BALTIMORE, in Ireland, IV. 404. — in Maryland, IV 404; XIV. 331— attempt of the British on, in 1814, V 617—suicides in, XX. 800—temperature at, XXL 421.

BALTINGLASS, Irish town, IV. 405; XXI. 859

BALUE (Jean), IV. 405. BALUSTER, IV. 405; III 489, 507. BALUSTRADE, IV. 405; III 479. BALUZE (Etienne), IV. 405—his collection of capitularies, VI 221.

BALZAC (Honord), French novelist, IV. 406.

- (JEAN-LOUIS-GUEZ DE), IV. 406. BAMBA, in Africa, IV. 406. BAMBARRA, African country, IV. 406; II.

228. BAMBERG, town of Bayaria, IV. 406-early printing at, XVIII. 592.

BAMBOO, IV. 406; V. 216—its cells, 66—paper made from, XVII. 249—used as an instrument of punishment in China, VI 564; and in Cochin-China, VII 49 -abundance of silica in, V. 97.

Bamborouge, village in Northumberland,

IV. 408-castle, XVI. 300. BAMBOUR, African country, IV. 408; XX.

Bambridge, prison-keeper, XVIII 567, 568.

# BAM—BAN

BAMIYAN, in Afghanistan, IV. 408. Bamlite, mineral, XV 86 BAMPTON, town in Oxfordshire, IV. 408in Devonshire, ib Ban, or Banus, IV 408

- or Bann, IV. 408. BANAGRER, Irish town, IV. 408 Banalbufar, fown in Majorca, IV. 408
Banana, IV. 408; V 79, 84, 294, 211—
fibre of, XXI. 783—in Mexico, XIV

 order of plants, V 211. Banas, or Bunass, river in Gujerat, XL 91 Banat, in Hungary, IV. 408, XII. 10. BANBRIDGE, Irish town, IV 409 BANBURY, town in Oxfordshire, IV. 409.

bridge, XII. 600.

BANCA, island, IV. 409; XX. 808-mines of, XV 240.

Strait of, XX. 808

Bancalar, AX.

Bancaları (M), his discovery of the dia-magnetism of flames, L 981 Banchus, genus of insects, IX. 191. Bancoora, town in Hindustan, IV. 409. Bancroft on the art of dyeing, VIII 274,

277 et seg - (Archbishop), hbrary founded by, XIII 395

Band, in architecture, III. 507. 

ORIENTAL, IV. 410. See Uruguay. BANDALRER, IV 410. Bandanna, IV. 410-handkerchiefs, manu-

facture of, VIL 449 BANDELLO (Matteo), Italian novelist, IV. 410—his romances, XIX. 284. BANDINELLI (Baccio), sculptor, IV. 411;

XIX. 863.

Bandini (Angelo Maria), IV 411—on political economy, XVIII 220. BANDITTI, IV 411.

Bandon, Irish town, IV. 412,
—— river, VII 371, BANDORE, IV. 412. BANDROL, IV. 412 BANDUSLÆ FONS, IV 412. BANE, IV. 412

DANE, IV. 412
(Donald), XIX. 749
BANFF, town, IV 412—herrings, IX. 639
BANFFSHIRE, IV 412—agricultural statistics, XIX. 796, 797, 798—population, 799

BANG, or Banga, IV. 413; XX. 804 BANGALORE, in Hindustan, IV 413-stormed by Lord Cornwallis, V 541. BANGKOK, in Siam, IV. 413; XX. 232, 233,

BANGOR, in Wales, IV. 414—in Ireland, ib.—in Maine, ib., XIV. 98. BANGOR-YS-COED, in Flintshire, IV 414 Bangorian Controversy, IV. 414; XI 549—Butlers' supposed share in, VI. 29.

BANG-PA-SOE, in Siam, IV. 414. BANGUEY, island, IV. 414. Baniar, island, IV. 414.

BANIAN, IV. 414. - or Banyan tree, IV 414; V. 77, 206 ; IX. 536.

Banias, town in Palestine, IV. 414. BANIER (Antoine), IV 414. BANISTER (John), IV 414.

———— (Capt ), his explorations in Austra-

lia, IV 255.

Banjarmassin, in Borneo, IV. 415; V. 47. Bank, IV 415-of Venice, XV. 488-Amsterdam, ib.—Hamburgh, 489-Amsternam, 10.— Hamburght, 489—Royal Bank of Scotland, 484—British Linen Co, 1b.—of Bengal, VI 70—of Athens, XI 17—Western Bank of Scotland, XV. 468; its bankruptcy, 486 -City of Glasgow, 486 and n. See

Banks, Banking
— of England, XIII. 663; XV. 455, founder of the, XVII. 340—its charter, XV. 455; renewals of, 457—emses of 1745, 1780, 1797, 456—letter from its directors to the government in 1857, 468, n—mode of printing its notes, VIII. 810, n. 2—Biamah's machine for numbering and dating its notes, V. 274—its difficulties in 1796 and 1797, 559, 561-acts of Parliament

# BAN-BAN

respecting, in 1826, 645—renewal of its charter in 1764, 469—act of 1844, 462; its suspension in 1847 and 1857, 467the only importer of gold bullion, VIL 84—importation of gold by, 85—management of, XV. 470—its connection with the government, 470, 473-tabular view of the issues, securities, bullion, &c , of, 475 et seq. Bank of France, X. 262; XV 489.

of Ireland, VIII. 226; XV. 488. of Scotland, XV, 483-constitution and objects of, 484.

notes, XV. 426, 446; VII 489, 200numbering and dating of, V. 274-suppression of small notes in England, 644—their influence on commerce, VII. 189, 199, 200-when they first became general in England, 189-depreciation of their value, 199, 200; XV. 428—steel-engraving of, VIII 809—distinction between them and bills of exchange, XV. 446-their conversion into coin, 447, 448, 449—issued by the Bank of England monthly, 478, 479; by private banks in England and Wales, 482; by the bank of France, 490—expediency of suppressing L.1 notes, 487—printing of, XVIII 557; VIII 810, n 2. BANKER, IV. 415—act of 1857 against

fraudulent returns by bankers, XV. 449—advantages afforded by, 450— bankers of Greece and Rome, 454

BANKING, IV 415-Irish, XIL 527; XV. 487 — in the United States, 491 — application of limited liability to, XVII. 323; its disadvantages, XV. 452—in Prussia, XVIII. 671—Spain, XX. 491 a branch of statistics, 550 See Bank, Banks, Credit, Exchange.

See Embankment. Bankıva cock, XVI. 789.

BANKRUPTCY, IV. 415—Lord Brougham's Act on, 417—Irish system of, 1b.— Scotch, 1b .- puts an end to the indentures of apprentices, XIV. 346 - old Roman law against bankrupts, VI. 740 a disqualification for sitting in the House of Commons, XVII. 295-origin

of the name, IL 7.
Banks—in London, XIII. 662—Glasgow, anks—in London, Alli. 602—Grasgow, X. 655—Edinburgh, VIII. 403—Irish, XII. 529; XV. 488 — Scotch, 483, 485, 486—in Canada, VI 155 — United States, XXI. 427, 441—Toronto, 314— New York, XVI 228; their condition in 1857, 1b 229-in Portugal, XVIII. 398 —numerous failules of, in 1825, V. 643; XV. 460; in 1814-15-16, 460—Bank Restriction Act, II. 268—their tendency to encourage gambling and overtrading, XV 451.

private, XV. 459—notes issued by,

joint-stock, XV. 459, 448—measures for establishing, in 1826, 461 progress of the system, ib.-list of, in England and Wales, 480, 481. of deposit and issue, XV. 450, 454.

Savings. See Savings Banks. (John), dramatist, IV. 418 (Sie Joseph), IV. 418—his obser-

vations on a spider, III. 375—catalogue of his library, IV. 714; VIII. 201—accompanies Captain Cook, VII. 340 on luminous crustacea, 539.

- (THOMAS), sculptor, IV. 421; XIX.

BANKS'S ISLAND, IV 421. Bann, river in Ireland, IV. 421; III. 284; XII. 505; VIII. 122; XXI. 845—fish-eries of, IX 626.

Bannatyne, port, in Bute, VI. 26.

MSS., XIII. 401.

- Club, XXI. 414.

Banner, IV. 421—armorial insignia borne on banners, XI. 322. BANNERETS, knights, IV. 421, VI. 621. Bannister (John), comedian, IV. 421. Bannockburn, IV. 421—defeat of Edward II. at, VIII. 681; XIX. 756.

Bannow, Irish river, XXI. 845. BANQUETING room or house, IV. 421.

# BAN-BAR

Banquette, IX. 819. Bantam, town in Java, IV. 422. BANTRY, Irish seaport, IV. 422—barony of, XXL 846 - Bay, IV. 422; VIL 371-general

Hoche's arrival at, X. 104.

BAOBAB free, IV. 422; V 184; II 226;

XVII. 626 See Adansonia.

BAPAUME, French town, IV 422 Baphetes, genus of fossil reptiles, XVII.

BAPHOMET, IV. 422.
BAPTISM, IV 422; XXI. 219—by fire, IV. 425—of the dead, 426—hypotherical, ib -Solemn, and lay, 1b -of bells, &c, ib.—one of the religious rites instituted by Christ himself, I, 482—catechumens, or candidates for, VI. 333—of children

by Roman Catholic missionaries, XV. 276—registration of, XVIII. 831—how regarded by quakers, 716—Robinson's History of, XIX. 237. See Baptists, Anabantists

Baptismal vow, IV. 426-Presents, ib. Baptiste, or Jean Baptiste Monnoyer, painter, IV. 426

BAPTISTERY, IV 427.

BAPTISTS, IV 426; IL 741-number of their places of worship in England and Wales, VIII. 743; in Scotland, XIX. 801.

Bar, in courts of justice, IV. 427.
in heraldry, IV 427; XI 328.
in music, IV. 427.

in rivers, IV 427; XVII. 585, XIX. 215-how formed, XI 225-theories on their formation, XVI 80-conditions under which formed, ib

- confederacy of, XVIII. 146. – a Turkish town, III. 278. BAR-LE-DUC, French town, IV. 427. BAR-SUR-AUBE, in France, IV Bar-sur-Seine, in France, IV. 428. Bara, a festival, IV. 428. BARABA, in Siberia, IV. 428. Barabra, African people, II. 219. Baracoa, in Cuba, IV. 428. BARAHAT, in Hindustan, IV 428.

BARANGI, IV. 428. BARANYA, in Hungary, IV. 428. Baranzano, philosopher, IV. 428 Barataria, island, IV. 428.

BARALIPTON, in logic, IV. 428.

BARATHRUM, IV. 428 BARATIÈRE (John Philip), IV. 428. BARBACAN, IV. 429; VI. 327. Barbacous, birds, XVI. 778.
Barbadoes, IV. 429—sugars of, XX. 795.

BARBARA, IV. 431.
Barbarelli (Giorgio.) See Giorgione. BARBARIAN, IV. 431

Barbarın (Chev. de), his spiritual school of magnetism, XX. 423. BARBARISM, IV. 431.

Barbaro on architecture, III 451. BARBAROSSA, IV. 431; II. 567.
BARBARY, IV 431; II. 223; XXI. 380dynasty of the Almohedes, II. 601—wars with Spain and Portugal, 619

-French trade with, X. 259-slavery in, XX. 321.

Barbastro, a Spanish city, IV. 431. BARBATELLI (Bernardino), IV. 431. Barbatio, VII. 805.

BARBAULD (Anna Letitia), IV 431; IL 428—on the poetry of Collins, VII 129 -on Richardson's novels, XIX. 159. BARBE, IV. 432.

Barbel, fish, angling for, III. 161. Barbels in fishes, XII. 221. BARBER, IV. 432—origin of barber's pole,

Surgeons, III. 114; VIII. 223.
BARBERINI VASE, IV. 432. See Portland

- library, XIII. 412. BARBERINO (Francesco da), IV. 432. town in Tuscany, IV. 432.

BARBERRY, plant, IV. 432, 660; V. 153, 181, 128 embryo in the seed of, 76. See Berberis.

order of plants, V. 181
BARBEYRAC (Je'n), IV. 482—his transla-

# BAR-BAR

tion of Cumberland's work, De Legibus Naturæ, VIL 580

BARBEZIEUX, in France, IV. 432. Barbican, IV. 429 Barbicans, birds, XVI 779.

Barbicornis, genus of insects, IX. 208. Barbier (M), on anonymous books, IV 712; III. 257

BARBIERI (Giovanni Francesco), IV. 432; XVII 73.

- (PAOLO ANTONIO), IV. 432. BARBITOS, IV 432

Barbon (Nicholas), on political economy, XVIII 219.

Barboteau on ants, III. 261. BARBOUR (John), IV. 432-his poetry, IX. 796.

BARBUDA island, IV 436 Barbus, genus of fishes, XII. 257. Barbut (James), his work on insects, IX.

BARCA, in Africa, IV. 437; VII. 610, XXI. 352, 353.

- Soranus, IX. 578. BARCAROLLE, IV 437.

BARCELONA, in Spain, IV. 437; VI 331; XX. 467-taken by the Earl of Peterborough, V. 449—counts of, XX. 462. New, in Venezuela, IV. 437

BARCLAY (Alex), English poet, IV 437.

— (John), IV. 439 — (John), MD, anatomist, IV. 442 on ancient opinions concerning the soul, III, 310

(ROBERT), quaker, IV. 442.
(WILLIAM), M.D., IV. 438.
(WILLIAM), LL.D., IV. 439.
de Tolly, Russian commander, X.

154, 155

BAR-COCHEBAS, or Bar-cochab, IV. 443; XII 734, 775; XVII 195 BARD, IV. 443—bards of ancient Germany,

X. 574-northern, XIX. 264 BARDAS, IV. 443, 486. BARDESANES, IV. 443; X. 689—his muta-

tion of the psalms of David, XII. 189 BARDILI (Christoph Gottfried), IV. 443.

Bardsey, island, IV. 444 Bardylis, the Illyrian, XII. 364. Barebone's parliament, V. 416. BAREGES, French town, IV 444.
BAREILLY, city in Hindustan, IV. 444.

sepoy insurrection at, XVI 309. Barentz (William), his voyage of discovery, XVIII. 165. BARETTI (Giuseppe), IV. 444.

Barettier (John Philip), IV. 428 Barif (John), on wool, IL 353 BARFLEUR, French town, IV. 444. Barelle (Bayle), his works on insects, IX

BARGE, IV 444, 800, XX. 123. Bargy, barony in Wexford, XXI. 846. Barr, Terra di, IV. 444 Neapolitan town, IV. 444; XX. 242

Meapolitan town, IV. 444; AA. 242
Barldus, genus of insects, IX. 140.
Barnila, IV 444.
Barlum, VI. 486.
Bark of trees, IV. 444; V. 82, XXI. 287
—effect of marshy soils on, 269—oak-bark, 273; its use in tanning, XIII. 306-paper made from, XVII. 249.

(Peruvian.) See Cinchona. in navigation, IV. 445. BARKER (Robert), IV. 445.

(Thomas), on salmon-roe as a bait, ling, 163.

BARKER'S MILL, IV. 445; XII. 172; XI. 356; I. 889. BARKING, town in Essex, IV. 445

Barkly (Sir Henry), governor of Jamaica, XII. 675-76 Barkometer, XIII 306

Barlaam on sexagesimals, III. 578. BARLEUS (Gaspar), IV. 445. Bar-lathes, XXI. 390.
Barletta, Neapolitan scaport, IV. 445. BARLEY, IV. 445; IL. 379, 384, 886, 417;

IX. 759; V. 320; XVII. 630—culture and varieties of, II. 310—analysis of, V. 324 - brewing from, 320 - species of, ib qualities of the different varie-

# BAR-BAR

ties, ib.-Dr Ure's analysis of, 324malting of, 321—inorganic constituents of, 96—its use in distillation, VIII 48. See Corn-Laws.

Barley hummeller, II 282 - CORN, a measure, IV. 445. - sugar, XX. 795, 797

Barlocci (Saverio), on the electricity of the solar rays VIII 569, XIV. 18-on solar magnetism, XVI 596 Barlow (Francis), painter, IV. 445.

—— (JOEL), IV. 445 —— (P. W), his cast-iron sleepers, XVIII. 758—his rail, ib.

(THOMAS), bishop, IV. 446. (WILLIAM), bishop, IV. 446 (WILLIAM), mathematician and divine, IV 446.

- (W H), on the strength of beams, XII 591

· (Prof), his contrivance to counteract the local attraction of the needle on ship-board, L 745, 990; XIV. 9, 90 XX 27—on magnetism, XIV. 10, 33, 34, 35, 36, 39, 40, 49, 50, 51, 52, 53 et seq -his electro-magnetic globe, 65his method of magnetizing bars, 73--his essay on the strength of timber. XX. 717-on the strength of beams, I 876-cohesive strength of timber, XX. 171-strength of materials, 748-his telescope, XXI. 123-his lens, ib.

BARM, IV 446 See Yeast BARMEN, town in Prussia, IV. 446. Barmoor, in Derbyshire, intermitting spring at, VII 755

Spring at, Vil 755

Barmouth, Welsh town, IV. 446.

Barna, IV 742. See Varna.

Babnabas (St), IV. 446; IX. 490; XVII.

346, 347—epistle of, IV. 446—gospel, ib. BARNABITES, IV. 446.

Barnaby Googe, his work on agriculture, Barnack oolite, as a building-stone, XX.

712 BARNACLE, IV. 446-Scaliger's notice of

Boyce's story concerning, V. 254, n. 4fossil, XVII, 101. BARNACLES, in farriery, IV. 446.

BARNARD-CASTLE, town in Durham, IV. 446, VIII. 267.

Barnard (Wm. Henry), his discovery of caoutchoucine, VI 204
—— (General Sir H), XVI 303.

Barnard's Inn. XIL 385 Barnaul, in Siberia, IV 447-meteorological observations at, XIV 687. Barnes (Joshua), IV 447

BARNET, town in Hertford, IV. 447—battle of, VIII 692.

BARNEVELDT (Jan d'Olden), IV. 447, XI.

BARNSLEY, town in Yorkshire, IV. 447. BARNSTAPLE, in Devonshire, IV. 447. — in Massachusetts, IV. 447.

Baro, or Baron (Peter), IV. 447 BAROCCHIO (G da Vignola), architect, IV.

Barocci (Frederigo), painter, IV. 447. BAROCO, IV. 447.
BAROMETER, IV. 448—first applied to

measure the heights of mountains by Mariotte, I. 658-further improvements by Bouguer, De Luc, &c., 730—rule of modern practice, 1b.—height of, in connection with atmospherical refraction, IV. 148—mountain, 465—portable, 466—method of computing the depression of the mercury in, VI 216—its periodic fluctuations, XIV. 667—horary variations of, VI 775—diurnal and annual variations of, 773, 774; XIV. 667, 668, 670 - barometric pressure, 639, 666barometric fogs, 654-Pascal on the sus pension of mercury in the tube of, XVII. 325—indicates the variations of the weather, XVIII. 26-use of, in measuring heights, 27—height of mercury in, 26—marine, XX. 27; use of, at sea, ib. See Barometrical Measurements.

BAROMETRICAL MEASUREMENTS, TV. 462-Laplace on, I. 820.

# BAR-BAR

Barometrical areometer, XII 87 BARON, IV. 468-barons of the exchequer, of the Cinque-ports, ib.—in English law, and in heraldry, ib .- coronet of a, XI. 336.

(MICHEL), French actor, IV. 469 (ROBERT), English author, IV. 469
BARONET, IV. 469; VI. 622—arms of, XI.

Baronets of Scotland, or of Nova Scotia, IV 469

- of Ireland, IV. 470; XII. 480. BARONI (Leonora), IV. 470 BARONIUS (Cæsar), IV 470. BARONY, IV. 470.

BARQUICINIETO, in Venezuela, IV. 470. BARRA, island, IV 470, 471, XI. 278

or Vaia, in commerce, IV. 470. African state, XX. 51.

BARRACAN, IV. 470 BARRACEPORE, in Hindustan, IV. 470outbreak of the mutiny of 1857 at. XVI. 302.

Barracks, IV. 470—British, III 664— Turkish, 659—London, XIII 679—royal artallery, at Woolwich, XXI 926.

Barradas, his invasion of Mexico, XIV.

Barramanal, in Hindustan, IV. 471 Barras (P. J F Nicolas), Comte de, IV. 471; X 106, 115 et seq Barrator, or Barretor, IV. 471, 472.

BARRATRY, IV. 471. BARRAUX, French fortiess, IV. 471. BARRAY, or Barra, Island, IV 471.

BARRE (L. F. Joseph de la), IV. 471.

BARREL, IV 471—of a watch, ib—in ana tomy, 1b -going-barrel in clocks, VII.

of guns, IV. 471; XI 96; XX. 213 -proof of, XI 97-browning of, 101rifled, 127-boring of, V. 44-bronzing,

BARREN CAPE, island, IV. 471. - ISLAND, IV. 471. BARRÈRE DE VIEUZAC (Bertrand), IV 471;

X. 82 et seg. Barreto (Pedro), VI 122 BARRETRY, in law, IV 472.

Barrett (George), his calculations of annutres, III. 222; XII 402. - (Dr), palimpsest discovered by, IV.

705—his edition of the gospel of St Matthew from a palimpsest, XVII. 200. - (Mr), his method of protecting the surface of building-stone, XX. 785

- and Co., their steam-engines, XX. 608, 609, 614. BARRHEAD, in Renfrew, IV. 472.

BARRICADE, IV. 472. BARRIER, in fortification, IV. 472.

BARRINGTON (Hon Daines), IV. 472 - (JOHN SHUTE), Viscount Barrington, IV. 472, Barringtoniaceæ, nat. order of plants, V.

192. BARRISTER, IV 473; VII. 465; II. 157. BARRITUS, IV. 473.

Barron's lock, XIII 533.

XVIII 728; XXI. 845.

(Dr Isaac), IV. 474—his unjust depreciation of Ramus, I. 30, n. 3—his character as a theologian and philosopher, 45-anecdote relative to his sermons, 1b., n 2-inconsistency of his opinions on certain ethical questions, 46-estimate of his lectures on optics, 680-his scale of velocities, VIII. 352-Newton's obligations to, 854—on the pursuit of happiness, XV. 573—on wealth, XVIII. 211—on industry, 226,

(Sir John), IV. 474—northern voyages of discovery promoted by, XVIII. 171—on the consequences of the battle of Trafalgar, XX. 121.

# BAR-BAS

Barrow (John), on the clergy of Iceland, XII, 199 BARROW'S STRAITS, IV 475.

Barry (Sir Chailes), his improvement of street architecture, III. 506-iron roofs designed by, XIX. 395-new palace of Westminster designed by, XIII. 668

(Edward), iron roof elected by,

XIX. 399. (GIRALD DE), IV. 475—on the cli-mate of Ireland, XII. 504.

- (James), painter, IV. 476phael's pictures, III 708-his character as a painter, XVIL 79, 80, 84.

(Dr Martan), his microscopical observations on different parts of structure, IL 769-his ascent of Mont Blanc, 628-on the formation of ova, XVII 682.

(Mr), actor, XXI 175 (Mrs), actress, XXI 174. in heraldry, IV 478; XI 328 BARRY-BENDY, in heraldry, IV. 478. Bars, in Hungary, IV 478. Barsac, French town, IV. 478. Barsowite, mineral, XV. 72

Barsumas, XVI. 152
BARTAS (G. de Salluste du), poet, IV 478.

(Du), on zoophytes, XXI 991. BARTER, O1 truck, IV. 478. BARTFELD, town in Hungary, IV. 478.

BARTH (Jean), IV. 478
——— (Dr), his discoveries in Africa, II 211; X. 478, 479-his visit to Baghermi II. 229-his account of Houssa and Sokoto, XI. 776, 778, of Bornou, V 50, 51, 53—on the Tschadda, affluent of the Niger, XVI. 266 - his visit to Lake Tchad, XXI 80; to Timbuctoo, 280.

Barthélemi (M), V. 558. Barthélemy (Jean-Jacques), Fiench BARTHÉLEMY (J writer, IV 478 - DR GROAIN (St), French village

IV. 480 BARTHEZ (Paul Joseph), IV 480. BARTHIUS (Gaspard), IV 48L BARTHOLINUS (Gaspard), IV. 482 tomy, II. 761.

(Erasmus), double refraction discovered by, XIII. 452; XVI 531 —— (THOMAS), IV 482; II. 761—on the

period of human utero-gestation, XIV. 423 BARTHOLOMEW (St), IV. 482.

ısland, IV. 482 massacre of, X. 32; XI, 625. hospital, London, XIII. 673.

BARTIZAN, IV. 482. BARTOLOCCI (Julius), IV 482. Bartolomeo (Fiancesco), painter, IV. 482
—his style of painting, XVII. 66

BARTOLOZZI (Francesco), engraver, IV 482: VIII 809. BARTON (Benjamin Smith, M D), natural-

ist, IV. 482 ON-HUMBER, in Lincoln, IV, 483.

(Elizabeth), impostor, II 42. (Sir John), on microscopic lines,

XIV. 801.

(Mr), on the population and mortality of the United States, XV. 605. Bridge, aqueduct at, III. 338.

Barton's coining-machine, VII. 90.
——lamp, XIII 171.
BARTSCH (Adam von), IV 483. BARUCE, the prophecy of, IV. 483. Barystrontianite, XV. 95

Baryta, genus of birds, XVI. 748.
BARYTES, or Baryta, IV. 483; VI. 486;
XV. 65, 94—Dr Crawford on its medical properties, VII. 486-specific gravity of, XII. 88—used to adulterate white lead, XIII 302—its poisonous qualities, XIV. 434-optical properties of, XVI.

Baryto-calcite, XV 95. - celestine, XV. 95. BARYTONE, IV. 483 BARYTONIUM, IV. 483. Bas (Jacques Phillipe le), IV. 483. Bas-relief, IV. 483, 492.

#### BAS-BAS

BASALT, IV 483, XV 133, 135, 155-specific gravity of, XII 88—region of, in Syria, XX. 903-contains phosphoric acid, II. 391-Dolomieu on the origin of, VIII. -in Ireland, XII 504 - Palestine, XVII. 189-melting and moulding of, XV. 132, n. 2-its columnar structure explained, 165-water in, 151-dyke of columnar, 165—form of, 190 Basan, or Bashan, IV 483-kingdom of.

XX. 908—mountains, 1b Basaniste, genus of zoophytes, XXI. 982. BASCINET, IV 483.

Basco (Michael de), bucaneer, V 711.

Base, in architecture, III. 507. - of operations, in war, XXI. 703change of, 706.

Basedow (Johann Bernhard), IV 483. Baseggio (G.), on birds, XVI 731. Basel, or Basle, in Switzerland, IV 483. 484; XX 882—silk manufacture in, 278—battle near, 884—average temperature of, 889-its libraries, XIII 424 Basellaceæ, nat order of plants, V 203.

Basement, in architecture, III 507 Bases, in the trigonometrical survey of Britain, XXI 334

Basette, game with cards, IV. 491. Bashan, IV 484 See Basan. Basharians, a Mahometan sect, IV. 484. BASHAW, or Pasha, IV 484 BASHEE ISLES, IV 484.

Bashford (Mr), his endeavours to improve the silk-worms of India, XX. 295 BASHKIRS, IV 484-in Russia, XIX 522 Basignana, city of Piedmont, IV 484.

Basil THE Great, IV 484
—— plant, IV 485; V. 202, XI. 745.
—— in joinery, IV. 485.
Basilan, island, IV. 485.

BASILEUS, IV. 485

Basilian monks, IV 485. Basilic, or Basilica, IV. 485—early Roman, III. 446—in modern Rome, XIX. 364, 368-ancient Christian, 445

Bastlica, a Greek digest of laws, IV 485; VI 747, XIX. 827-Fabrot's translation of, IX. 466.

Basilicata, in Naples, IV. 486; XX. 237. Basilici, IV 486. Basilides, Gnostic teacher, X. 687.

Basilidians, a sect of heretics, IV. 486 worshipped Abraxas, II 48. Basiliensis (Codex), XIX, 838 Basiliscus, VII 311; VIII. 474.

- genus of leptiles, XIX. 34. Sec Basilisk Basilisk, a fabulous serpent, IV. 486, XIX. 34—symbol of, in hieroglyphics, XI. 392

a species of ordnance, IV 486. BASILIUS I., IV. 486-his code, See Basilica.

- IL, emperor, VII 313. Basilovitz (John), XIX. 472. Basing house, VII. 511.

BASINGSTOKE, in Hants, IV. 486-canal. XX. 837.

(John), said to have introduced the Greek numerals into England, III, 579.

BASKERVILLE (John), IV 486-his types, XVIII. 539--his printing ink, 545. BASKET, IV. 486

BASKET-MAKING, IV. 487—ancient Britons excelled in, V. 376.

- of earth, IV 489. BASKING-SHARK, IV. 489; XII. 322, 324—fishing for, on the Irish coast, IX. 634. Basmuric version of the Scriptures, XIX.

BASON, IV. 490. BASQUE LANGUAGE, IV. 490; IX. 390; XIII. 214

PROVINCES, IV. 490; XX. 493—people, IX. 350, 387; XVIII. 700; XX. 493.

Basra. See Bussora. Bass, or Base, in music, IV. 490; XV. 720—double, 709—bass-drum, 713. - BOOK, IV. 490; XI. 177.

# BAS-BAT

Bass, kind of matting, XX. 490 - STRAITS, IV. 490—discovery of, 253,

VIOL, IV. 490. Bassani (Giovanni Battista), IV 491. Bassano (Giacomo da Ponte), IV 491. - city in Lombardy, IV. 491 Bassantin (James), IV. 491. Basse, or sea-perch, XII. 274.
Basse Terre, IV 491, VI. 643.

or Guadaloupe, island and town,

XI. 72.

Bassein, Burmese town, IV. 491—treaty of, XL 504, 506 BASSET, or Basette, IV. 491.

Bassi (L. M. Caterina), IV. 492 - (Augustino), his work on the silk-

worm, IX 23 Bassia, genus of plants, IV 492, V. 199. butter, XVI. 496.

Basso-Rilievo, IV. 492; XIX. 5 Bassoon, IV 492; XV. 711 Bassora, IV. 492; VI. 24—its commerce, XI. 460

gum of, XI. 94. Bassorin, V. 73. Bassus, genus of insects, IV. 492, IX. 191. BASTARD, IV. 492-duties between parents

and, XVII. 276 sugars, XX. 795.
Bastards, a kind of banditti, IV. 494. BASTARDY, arms of, IV 494—bastardy law, XVIII. 313

Bastarnæ, IV. 494. BASTARNICÆ ALPES, IV. 494. Baster on zoophytes, XXI. 990, 992 n., 996 n. 6.

BASTERNA, IV. 494. Bastia, town in Corsica, IV. 494; VII. 417—siege of, XVI. 183

Bastiat (Frédéric), IV. 495 BASTILLE, IV. 495-its destruction, X. 52. BASTINADO, IV 495

Bastion, IV. 495-demi-bastions, IX. 809 -bastioned forts and lines, ib. - bastioned system of fortification, 831. BASTON, or Baton, IV 496.

XII 62-teeth of, XVI 452-in Egypt, VIII. 432 -precision of their actions when deprived of sight, XX. 498-in Java, XII 704.

or Batz, coin, IV. 496; XV. 445. Batalha, conventual church of, III. 449 BATAVI, IV. 496, 497.

BATAVIA, town in Java, IV 496; XII. 709 -arrack of, IIL 675-Dutch trade at, 757-Captain Cook's visit to, VII. 340.

Batavians, XI. 561 BATAVORUM INSULA, IV. 497. BATE (George), IV. 497.

- ISLE, IV. 497. Bateman (Dr), on the diseases of London, XV 608.

BATENITES, IV. 497. BATES (William), D.D., IV. 498. BATH, in Somerset, IV. 498-in Maine,

ıb.

or lower colite, XV 206, 207—as a building-stone, XX, 712, 717.

KNIGHTS OF THE, IV. 498; XI. 340; XIII. 119—Knight companion of,

BATH-KOL, a species of oracle, IV. 499
BATHGATE, in Linlithgowshire, IV. 499.
Bathlergus, genus of mammalia, XIV.

Batting, IV. 499—of sheep, II. 349— —Egyptians fond of, VIII. 448—pro-—Egyptians fond of, VIII. 448—promotes health, XIV. 440 See Baths.

BATES, IV. 505—ancient, ib.—modern, ib.—Roman, III. 470; XIX. 313—number of, in Cairo, VIII. 448—mud, XV. 39—of Pompeil, XVIII. 237—in London, XIX. 603. See Bathing, Buxton, Carlebed 24.

# BAT-BAU

BATHURST (Allen, Earl of), IV. 507.

(RALPH), M D., IV. 508. county in New South Wales. IV. 508, 282, 284, 289.

town in Western Africa, IV. 508. island, on the north coast of Austraha, IV 508 - island in the Arctic Seas, IV. 508.

BATHYANI, IV. 508. BATHYCLES of Magnesia, sculptor, IV.

Bathygnathus, fossil reptiles, XVII. 141. BATHYLLUS of Alexandria, dancer, IV 508, 398,

BATILUS, musical instrument, IV. 508. BATISTE, kind of cloth, IV. 508. BATMAN, a kind of weight, IV. 508.

Batmanson (John), IV. 508. BATNÆ (Sarug), ancient city of Mesopotamia, IV. 508.

BATNEARS, or Battles, a people of Hindu-stan. IV 508. Batoana, African tribe, XVI. 241.

BATON ROUGE, town in Louisiana, IV. 509

BATON, or Batoon, IV 509, 496. BATONI (Pompeo Girolamo), painter, IV. 509

Batory (Ladilaus), his Magyar translation of the Bible, XII. 19. king of Poland, XVIII. 143,

Batrachia, reptiles, XVII, 634-fossil, 153 -distribution of, 154, 634.

BATRACHIANS, IV. 509; XIX. 78—teeth, XVI, 430—fossil, XVII. 132—their bones, III. 86 et seg.—cochlear aperture, 99—vocal organs, 102—heart, 112—gills and lungs, 113—fecundation, XIX. 14—respiration, 74—reproduction, 75 eggs, 74-number known, 51, n.

Batrachite, mineral, XV. 89. Batrachocephalus, genus of fishes, XII.

BATRACHOMYOMACHIA, IV. 509 Batrachopus, fossil reptiles, XVII 132. Batrachus, genus of fishes, XII. 311, 312. BATSCH (A. J. George Charles), natural-1st, IV. 509. BATTA, IV. 510.

Battaillon (Dr), on the manner in which Roman Catholic missionaries baptise pagan children, XV. 277.

BATTALIA, IV. 510. BATTALION, IV. 510; III. 640 et seq . of artillery, 685 et seq; XXI. 715 et

BATTAS, country in Sumatra, IV, 510: XX. 806—inhabitants of, III. 749; XX. 805—their cannibalism, III. 270; XX. 805—their language, XIII 207—mode of writing, XX. 805. BATTEL, IV 510; III. 323; VIII. 280.

Battel's account of the orang-outang, XIV. 137.

BATTEN, IV. 510; V. 750. Batter, in architecture, III. 507. Battering, IV. 510—ram, ib. Battersea Park, London, XIII. 668—bridge, 676

BATTERY, IV 510; III. 685 et seq -different kinds of, IV. 511—floating from batteries, XX. 138—electrical, VIII 611—galvanic, I. 739; XXI. 611 et seq. in law, IV. 511.

Batthanyi (Count Casmir), XII. 23, 24. BATTICALOA, Island, IV. 511.

BATTIE, or Batty, IV. 511. See Batnears. BATTLE, town in Sussex, IV. 511.

BATTLE, town in Sussex, IV. 511.

engagement, IV 511.—Roman battles, III. 632.—plan of, XXI 698.

(Naval), XXI. 719 et seq.—rules

concerning, 707.

trial by, IV. 510; VIII. 230.

AXE, IV. 512; VI. 616, III. 636.

of the Four Days, V. 422. BATTLEMENT, IV. 513; III. 507.

Battoni (Pompeo), painter, XVII. 69. Battory, IV. 513. Battu, island, IV. 513.

BATTUE, IV. 518. BATUM, town in Asiatic Turkey, IV. 513. BAUCIS, IV. 513.

BAUDELOCQUE (Jean-Louis), IV. 513

# BAU-BAY

BAUDELOT DE DAIRVAL (Charles Cesar), IV. 513

Baudet-Lafarge (M T.), his works on insects, IX. 11.

BAUDIER (Michel), IV. 513.

Baudin (M), his account of a meteorolite, XIV 630

- (Capt), his voyage of discovery to New Holland, IV. 253.

BAUDIUS (Dominicus), IV. 513.

Baudrun, V. 10.

Bauer (M.), his microscopic observations on the spleen, II. 802-on the brain, 819—on the muscular filament, 821 on the optic nerve, 808 - on bloodglobules, XIV. 762.

(J. J), on rare books, IV. 709. BAUGE, in France, IV 513

a kind of drugget, IV. 513. BAUHIN (Jean), botanist, IV. 513.

Gaspard), IV. 513.

Bauhinia, a colossal tree of Venezuela,

XXI 536

Baulite, mineral, XV. 70

Baumann (C. Jacob), on human mortality, XV. 601. BAUMANS' HOHLE, natural caverns, IV. 514.

Baume, in France, VIII. 114.

(ANTOINE), IV. 514—his mode of

manufacturing sal-ammoniac, II 722his aræometer, III. 891-on clays, V. 344.

BAUMGARTEN (Alex. Gottlieb), IV. 514; IL 188

Baumgartner (M.), on magnetism, XIV 13-on solar magnetism, XVI. 596 Baumhaner, his work on insects, IX. 11.

Baur (F. C), on ancient mysteries, XV

Gurass founded by, II. 62.

BAUTZEN, IN SAXONY, IV. 514-battle of X. 161.

BAVARIA, IV. 515-army of, III 652 Joseph IL's plan of exchanging the Austrian Netherlands for, V. 516-monarchy of, XV. 412-Bavarian dialect, X. 587—presbyterianism in, XVIII. 485—coins of, XV. 441, 443—postal system, XVIII. 424—weights and measures, XXI 810-universities in, 492trade schools of, 823

Bavarian beer, V. 335-brewed in Edinburgh, 336.

Bayerstock (Mr), on brewing, V. 319. BAVIUS and MEVIUS, IV. 520.

BAWTRY, town in Yorkshire, IV. 520. BAXTER (Andrew), IV. 520—Warburton's enlogy on his work on the Nature of the Human Soul, L. 205-estimate of his ments, 206-his theory of dreams, VIII.

(RICHARD), IV 520—made chap-lam to Challes II., V. 420—Calamy's Abridgment of his history of his Life and Times, VI. 66.

- (WILLIAM), IV. 522.

Baxterian scheme of predestination, XVIII. 479.

- colour, IV. 522-salt, 1b.

window, IV. 522; III. 507. Baya, bird, XVI. 760. BAYADEER, Indian dancing girl, IV. 522; VII. 646.

BAYAN-KHARA, mountains, IV. 522. BAYARD (Pierre du Terrail), Chevalier de, IV. 522; VI. 615.

BAYAZIO, or Bajazid, Turkish city, IV. 523.

BAYEN (Pierre), chemist, IV. 523. Bayer's catalogue of stars, IV. 80. Bayes (Rev. Mr), on probability, XVIII. 589.

BAYEUK, town in France, IV. 523tapestry, ib.; XXI. 20-lace, XIII. 142, 143.

Bayezeed, VIII 486. Baylouda, desert of, XVI. 268. BAYLA, or Bela, IV. 523.

BATTA (Pierre), IV. 528-Condillac's re-

# BAY-BEA

marks on his refutation of Spinoza, VII. 235-the first writer who led to the misapplication of the term Spinoz-1sm, I 147-character of his writings, 151—opinions of the learned at the time of his appearance divided between Aristotle and Descartes, 152-his scepticism and ironical humour, ib -probable reasons for the omission of Montaigne from his dictionary, 152, 153-motives for copying the spirit and tone of the old academic school, 153-his character by Warburton and Liebnitz, ib., n 2; and by Gibbon, ib, n 3; 151, n. 3-his critical acumen unparalleled, but his portraits of persons defective, 154causes which contributed to unsettle his opinions, 1b -- fluctuations of his religious creed, ib -his propensity to indecency, ib -mischievous tendency of his writings, 155-benefits which have resulted to literature from his labours. ib .- his leaning to the system of the Manichæans apparent, but not real, ib estimate of his genius and acquirements, 156-lessons of historical scenticism to be learned from, ib -his Commentaire Philosophique, 156, n. 4-on anonymous books, IV. 711-his scepticism, XIX. 709

Bayley (John), his story of Pope Joan, XII. 786.

BAYLY (Lewis), IV. 524

Baynes on logic, XIII. 576, 585 Baynton (Mr), on the cure of ulcers, XX. 828

BAYONET, IV. 524-its value in war, XXI. 726.

BAYONNE, IV. 524.

Baza, a city in Spain, IV. 524.

BAZAAR, IV. 524-bazaars of Damascus, VII 639— of Baghdad, IV. 362— of London, XIII. 663—Morocco, XV 597 -Jerusalem, XII. 746-Persia, XVII.

Bazas, in France, IV. 525; X. 632 BAZAT, or Baza, a kind of cotton. IV 525 BAZEEGURS, tribe of Indians, IV. 525 BAZGENDGES, IV. 525.

Bazoche, kingdom of the, an order, XIII, 122.

BDELLIUM, IV. 525.

Beaches, XVII 585-raised, in geology, ib.; XV. 216—in Norway, XVI 322.
BEACHY-HEAD, IV. 525—naval action off, in 1690, XX. 840.

BEACON, IV. 525

BEACONAGE, IV 525. BEACONSFIELD, IV. 525.

BEAD, IV. 526—in architecture, III. 468, 507—bead-proof, IV. 526—bead-roll, ib -bead aræometer, III. 392.

BEADLE, IV. 526. BEAGLE, IV. 526; XI. 771.

Beah, river in the Punjab, XVIII. 687,

BEAK, or beak-head, of a ship, IV. 526. BEAKED, in heraldry, IV. 526. BEALE (Mary), painter, IV. 526.

- (Mr), on the sperm-whale, XIV. 232

(Mr), aviary and gardens of, at Macao, XVI. 767. Beam of a loom, IV 526.

Beam-compass, IV. 526.

Beam-engines, stationary, XX. 603-modified arrangements of, 607-compound,

Beaming, in weaving, XXL 784.
BEAMINSTER, town in Dorset, IV. 526. Beamish (Major), on the military charac-

ter of the French, III. 642 Beams, strength of, VI. 260; XIX. 375 et seq.; XX. 760 et seq -building up of, VL 261-fishing a beam, 263of, L 875-beams of a ship, IV. 526; XX. 186, 194—in the construction of iron bridges, XII. 586, 590—ironbeams, XX. 177.

BEAN, IV. 526, IX. 760—cultivation and

# BEA-BEA

varieties of, II. 312; XI 738-beanstraw as fodder, II. 313 — morganic constituents of, V. 96.

Bean, kidney, or French, IV 526, IX. 760: XI, 738,

- caper, order of plants, V. 188 cop, small fishing vessel, IV 527.

BEAR, IV 527
BEAR, IV 527, XIV 153; XVII 632—
dentation of, XVI. 462—in Lapland,
XIII 235—fossil, XVII. 172—fur from different species of, X. 349-hunting of in Sweden, XX. 211—shooting, 1b a constellation, IV 527-order of the, a Swiss military order, 527

Bearberry, V. 198. BEAR-ISLAND, IV. 527.

BEAR-LAKE (Great), IV 527

BEARD, IV 527-of the Egyptians, VIII 434-Persians, XVII 421-kissing the, IV. 529-women with, ib -of a comet, ıb

Beardmore (Mr), on hydraulics, XII. 127, 135, 141,

BEARING, in navigation, IV. 529 . X 482 -starboard and larboard line of, XXI

- in heraldry, IV 529 - in mechanics, XIV. 405, 406. Bearn, French province, X. 277 BEAST, IV 529.

fights, among the Romans, X. 399, II. 731

BEAT, IV 529-of drum, ib - (St), French town, IV 529 BEATERS, IV 529 See Gold-beating. BEATIFICATION, IV. 529

BEATING THE WIND, IV 529 — beating time, ib.—beating, in navigation, ib
BEATITUDE, IV. 529—mount of beatitudes, XVII. 183

BEATON (David), cardinal, IV 530; XIX. 773, 776-assassination of, III. 135; XIX. 777

(James), XIX. 769, 773—St Mary's College at St Andrews founded by, XXL 473.

Beatson (Dr), on naval signals, XVI. 109. BEATTIE (James), LL.D., IV. 580 -on Locke's views concerning innate ideas. I. 117—effect of his writings in diffusing a taste for enlightened criticism, 222-on dreams, VIII 176-on grammar, X. 766 and n, 772-poetry of, XVIII 125.

- (Joseph), his plan for preventing smoke in locomotives, XX 358

BEAUCAIRE, a French town, IV 532-Canal de, X. 244 Beauchamp (M.), his survey of the Black

Sea, IV. 740. Beaufort (Admiral Sir Francis), on the

surveys of the African coast, IL 510. (Caldinal), IV. 532, VIII. 688.

- French town, IV 582

(Dr), on the words that enter into the composition of Irish names of places, XII 524.

Beaufoy (M1), his attempt to procure the repeal of the test and corporation acts,

- (Colonel), on the variation of the needle, XIV. 53, 54—his variation transit, 81—his ascent of Mont Blanc, II. 627 - Society for the Improve ment of Naval Architecture instituted by, XX. 134-his experiments on the resistance of water to vessels, 158, 163, 662

BEAUHARNOIS (Eugene), IV. 532; X. 151 et seq.

Beaujlais, wines of, XXI 883. BEAULIEU (Sébastien de Pontault de), IV. 532-his expedition against Algiers, II.

BEAULY, in Inverness-shire, IV. 532. Beaumanoir (Philippes de), on French feudal law. IX. 524.

BEAUMARCHAIS (Pierre A. Caron de), IV. 532.

BEAUMARIS, in Anglesey, IV. 583; III.

# BEA-BEC

Beaumé (M), on the composition of gun-powder, XI 152—his hydrometer, III. 391.

BEAUMONT (Sir G. Howland), IV 533; XVII. 86.

— (Sir John), IV. 533 — (Mr), his lead mines, XV. 193, n ,

(Dr), his experiments on digestion, IX. 768, XVII 659, 660

— (Sir George), his liberality to Wordsworth, XXI 981—his influence on art, 387, 388

— and FLETCHER, IV 533 — their ments as dramatists, VIII 159—lines of the former on the royal tombs in Westminster, XV 415

 (M. de), on the Deluge, VII 720. Beaumontite, mineral, XV 76. BEAUNE, in France, IV 534

Beaunont (M de), on American penitentiaries, XVIII 571

BEAUPRÉAU, in France, IV 534. BEAUSOBRE (Isaac de), IV 534

Beautiful, signification of the word in Plato's works, I 317

BEAUTY, IV. 534-elements of, in architecture, III. 483 — sensibility of the Greeks to, XVII. 49, XIX 850, 851 -ideal, 851-emotions of, in the processes constituting eloquence, 137, 138 -article on, in this work, written by Jeffrey, XII 717

BEAUVAIS, in France, IV 555 - carpet-

manufactory at, VI 271 BEAVER, IV. 555, XIV 185, XVII. 632 -bones of its tail, III 76-pairing of, 181-its fur, X. 348-mode of manufacturing the skin, 351-instincts of, XII. 391-dentation of, XVI. 454, 455.

- hats, XI. 240-1. part of a helmet, IV. 555.

Bébé, a dwarf, VIII 271. Bebeenne, alkaloid, V. 204.

BECAFICO, species of bird, IV. 555. BECCAFUMI (Domenico Mecherino), IV. 555.

Beccamoschino, bird, XVI. 756 Beccari, Italian poet, XVIII 111.

- on ignis fatuus, XIII 457 BECCARIA (C. B, Marquis of), IV 555his objection to the right of property, XVIII 228-on law, XIII. 270

- (GIAMBATTISTA), IV 559-on aurora bonealis, 250-on electricity, VIII, 528 - measurement of a degree by, IX. 550-on the cause of the formation of clouds, VII. 39-on the electricity of the atmosphere, VIII. 578-on the magnetic effects of electricity,

BECCLES, in Suffolk, IV 561.

- (Mr), fossil mammals discovered by, XVII 161.

BECERRA (Gaspard), IV 561, XVII. 75 Beche (Sir H. de la), his report on coal for the steam navy, X. 319—on the bars at the mouth of rivers, XI. 225 on the value of the produce of British mines, XV. 247-on the transportation of detratus by rivers, XVI. 85—on the formation of deltas, 86—museum of economic geology promoted by, XXI.

BECHER (Johann Joachim), IV. 561 Bechtermunze (Henry and Nicholas), early printers, XVIII 532.

BECK, or Beke, IV. 561 or Beek (David), painter, IV. 561. (Dr), his work on medical juris-prudence, XIV. 424

BECKET (Thomas à), IV. 562; VIII. 671 -his murder, 673.

- (St Thomas), brotherhood of, XXI.

BECKFORD (William), IV. 563. Lord Mayor of London, his address to George III., V. 471; XXI. 308.

- (Mr), on hounds and hunting, XI. 664, 765 et seq.; XII. 84.

Beckford's fuse for blasting rocks under water, IV. 756.

#### BEC-BEE

BECKMANN (Johann), Professor at Gottingen, IV. 563-his history of coaches, VII 42-on the burning of books by the clergy, IV. 712—on the divingbell, VIII. 60

Beclard (Mons), on adipose tissue, II 787-on arterial tissue, 790-on erectile tissue, 799—on the spleen, 801—on exhalants, 803—on lymphatics and lymphatic glands, 805—on the ligaments, 823, 824—on fibro-cartilage, 832—on the mucous membranes. 836-on the skin. 834-on the villi of the ileum. III. 61-on the classification of the organs of the human body, 3.

Becquerel (M), on diamagnetism, I. 980, 981—on the pyro-electricity of tour-maline, VIII 559—on the influence of heat on the electric fluid in metals, 561 -on electricity produced by pressure, 563; and by combustion, 569—on magnetism, XIV 23, 28, 29, I. 981—on the composition of the blood, XVII. 664; of the urne, 666-on the spectrum, XVI 550, 595-his decomposing cell, XXI 620-on electrical currents 623, n 1—discoveries of, 632—experiments in voltaic electricity, 621, 633, 635, 637-his work on electricity, 655.

BECTASSE, Turkish sect, IV 564. BED, IV. 564—dining-bed, ib; II. 80—of justice, IV 565.

BED-CHAMBER, Lords of the, IV 565; XI.
775—ladies of the, 776—bed-chamber women, 776.

Bed-lathes, XXI 390. Bed-mould, in architecture, III. 508. Bed-work irrigation, XII 612. BEDA, Venerable Bede, IV

Saxon-English Bible, XIX. 840 BEDARREUX, French town, IV. 565.
BEDDOES (Thomas), physician, IV 565
— Sir Humphry Davy's connection
with, VII 667; I. 967, and n. 1.
Bede, IV 567. See Beda

BEDELL (Dr William), bishop of Kilmore and Ardagh, IV. 567—Burnet's Life of, V 792.

BEDFORD, IV. 567.

\_\_\_\_\_ LEVEL, IV. 567; VI. 114; II. 863; VII. 510; XII. 48; XIX. 12 pauperism in, XVIII 304, n. 2 NEW, seaport in Massachusetts, IV.

568-free library at. XIII. 430 (Duke of), on peace with France

in 1800, V. 570 - castle, VI 827. - willow, XVII, 759.

BEDFORDSHIRE, IV. 568—population and value of property in, VIII. 754.
BEDLAM, IV. 569.

BEDLOE (William), IV. 569

BEDNORE, in Hindustan, IV. 569-treasure taken m, XI. 494. Bedos (F. de Celles), on the organ, XVI

709. BEDOUINS, IV. 569; III. 348 et seq.-

of Hadhramaut, 358-moral character of the, 354—in Idumæa, XII 359; Syria, XXI. 907. See Alabs BEDRIACUM, village of Cisalpine Gaul, IV.

569-battle of, XIX. 339 Beds of rivers, XIX. 204, 205, 207. BEDWORTH, in Warwickshire, IV. 569

BEDWYN (Great), in Wiltshire, IV. 570. BEE, IV. 570; XVII 637—Butler's work on bees, IL 257-bees'-wax, IV. 572feeds on poisonous plants, III. 180stingless species in Jamaica, XII. 682instincts of, 391-construction of combs, 391, 392-mode in which the three different kinds are produced, XVII. 688—its sting poisonous, XIV. 440—leaf-eating, IX. 199—mason, 200—solitary, 201-honey, 203-humble bees, 201.

See Aplary.

BEE-EATER, bird, IV. 588, 585—common,

XVI. 772—cowled, knob-fronted, and poe, 754.

Brech, IV. 588; XVII. 758—timber, XXI. 274—strength of the wood, XX 757—specific gravity of the wood, XII. 89.

## BEE-BEI

BEECH-MAST, IV. 588-oil, ib BEECHEY (Sir William), painter, IV 588. (Admiral), his arctic expedition, X 473, 296; XVIII, 171, 172—on the bore of the Severn, XVI. 65, 66—on the low water-line of the Severn, 73, n 2 on the specific gravity of sea-water, XVII 578

Beeching (Mr), his life-boat, XIII. 446. Breder, in India, IV 589.

BEEF, IV 589; IX. 761-loss of weight in roasting, 765, in boiling, 766-imports and exports of, VIII. 734, 736

BEEF-EATER, yeoman of the Guard, IV. 589, XI 74-origin of the name, III. 324.

- bird, IV. 589; XVI. 762. Beefwood order of plants, V 208 BEELE, a kind of pickaxe, IV 589 BEELZEBUL, IV. 589, 338-oracle of, XVII.

BEEMAH, river in Hindustan, IV 589 BEER, or BIR, town in Asiatic Turkey, IV.

- IV 589; IX. 759-discovery of, assigned to the Egyptians, V. 318—among the ancients, ib—in France, X. 256 brewing, storing, and fining, V 318 et seq, 330--Bavarian, 335; IV. 517-Prussian, XVIII. 669-Mr Stevenson's mode of analysis for, V. 336—the distillation process of analysis for, 337quantity brewed in England, VIII. 731 -value of exports of, from the United Kingdom, 736-beer measures, XXI. -Irish trade in, XII 521-in Scotland, XIX. 805

machine, Bramah's, V 273. (Dr E.), on Smaithe inscriptions,

BEERALSTON, in Devonshire, IV 589. BEER-REGIS, in Dorsetshue, IV 589. BEERSHEBA, IV. 589. BEES (St), in Cumberland, IV. 589.

BEESTINGS, IV 589, VIL 152.

BEET, O. BETA, genus of plants, IV 589, V 74, 203, XI 740, 741, IX. 760—its culture in Belgium, IV. 624—different kinds of, XX. 796—inorganic constituents of, V. 96

root sugar, its manufacture, II. 83; IV 589; XX 791, 792, 796 et seg.—in France, X 248, 256, II. 335-in Germany, 1b —Belgium, IV. 625—in England and Ireland, II. 334, 335—Prussia, XVIII. 666.

BEETHOVEN (Ludwig Van), IV 590-his education in music, XV. 703—on recitative, 718—his opera Fidelio, XXI 795.

BEETLE, an order of insects, IV. 590, IX. 25-found in sarcophage, IV 473-their tenacity of life, III. 176-meaning of, in hieroglyphics, XI 381—of the turnip, II. 319. See Coleoptera.

- a wooden instrument, IV. 590. BEEVES, IV. 590 BEFORT, or Belfort, in France, IV. 590.

BEGA (Cornelius), painter, IV. 591. BEGARELLI (Antomo), IV. 591.

BEGGAR, IV 591. Begging frars, XIV. 497.

See Mendicancy, Alms. BEGLERBEG, or Beglierbey, IV. 591.

Begoniaceæ, nat. order of plants, V. 204. Beguards, IV 591. BEGUINES, IV. 591.

Begums of Oude, XI. 495. BEHABAN, IV. 591. Beheading, IV. 591; XIV. 445. Behem (Martin), IV 591.

BEHEMOTE, IV. 591. BEHMEN (Jacob), IV. 592 See Boehm BEHN (Aphara), IV. 592—her novels, XIX.

270—plays of, XXI. 171 BEHRING'S ISLAND, IV. 592; II. 464. - Strait, IV. 592.

\_\_\_\_\_ voyages, IL 464; XVIII. 170. Behut, river, XII. 785.

Beighton (Henry), his improvements on the steam-engine, I 770; XX. 575. BEILAN, in Syria, IV. 592. BEINASCHI (Giovanni Battista), IV. 592. Being, Aristotle's notion of, III. 547-

#### BET-BEL

Buddist opinions of, X. 723—philosophy of, XIV. 603—Plato on, XVII, 798, 891 Beirout, IV 691. See Beyrout.

BEIT-EL-FARIH, in Arabia, IV 592. BEITH, IV. 592 BEJA, in Portugal, IV 592.

BEJAPOUR, in India, IV. 592.

Beke (Dr), his researches in Abyssinia, II. 57-on the mountains of the moon, 213. Bekes, in Hungary, IV 593

Bekker (Balthasar), IV 593—his work against witchcraft, III 313—persecuted for it by the clergy, 314, 315, 2. 1-his life and writings, 313, n

Bel (Matthias), IV. 593.

or Belus, the supreme god of the

Chaldeans, IV. 593 - temple of, at Babylon, 341.

- AND THE DRAGON, an apocryphal book, IV. 593

Bela, or Bayla, IV 523. Belay, sea-term, IV. 593.

Belbeis, Egyptian town, IV 593; VIII

Belcher (Sir Edward), his searching expedition, XVIII 171, 173

BELEMNITE, fossil, IV. 593; XV. 398, XVII. 114. Belemnitidæ, family of extinct mollusks,

XV 398 Belemnous, fossil cuttle-fish, XVII 114

BELENYES, town in Hungary, IV. 593. BELERIUM, IV. 594.

Belesis, IV. 594. Belfast, IV 594—cotton manufacture of, VII 458-lmen manufacture of XIV. 285-societies in, XX 368. BELFORD, in Northumberland, IV 594.

BELFORT, or Befort, IV. 595, 590. Belfour (J. Daniel), his rope machinery, XIX. 406, 408.

BELFRY, IV. 595. Belgic skull, III 29. BELGICA GALLIA, IV. 595. BELGINUM, IV 595.

BELGIUM, IV. 595, IX. 399-its separation from Holland, XI, 580-Devonian rocks of, XV. 199; carboniferous, 204; eocene, 213, miocene, 214-monarchy of, 412 — French intervention in, X 205—works on the population of, XV. 620—duties on British fish in, IX. 641, n. 2 annual production of coal, VII. 126, and extent of coal area in, 127-Bntish consul in, 337—iron ores of, XII. 541, 574—Jews in, 783—Belgian versions of the Bible, TV. 702-libraries of, XIII. 423-newspapers of, XVI. 202coms of, 388-lace manufacture, XIII. 143-proportion of insane, XIV 536paper-making, XVII. 261 — metallic produce of, XV. 248—railway statistics, XVIII. 787—postal system, 424—beet-root sugar, XX. 798—weights and measures, XXI. 810—universities in, 492. See Holland.

BELGOROD, Russian city, IV. 627.
BELGRADE, IV. 627; XX. 61, 62—Prince
Eugene's victory at, IX 370—siege of, by the Turks, XXI. 369-taken by Solyman the Magnificent, ib; XX. 407—taken by the Austrians, XXI, 371.

Belgrano (General), IV 832. Belhaven (Lord), on agriculture, II. 261. Belhelvie links base, in trigonometrical survey, XXI. 332, 334 BELIAL, IV 627.

BELIDOR (Bernard Forest de), IV. 627on hydraulics, XII. 107—on the strength of beams, VI 259—experiments on the strength of timber, XX. 772

BELIEF, IV. 627-different degrees of, L. 477—how produced, XIX. 119. BELIEVERS, IV. 627 BELION, river, IV. 627.

BELISARIUS, IV. 627; VII. 312; XII. 641; XIIL 28; XIX. 363.

Belize or Balize. See Honduras.
——town, XI, 610.

BELL, IV 627-curfew, VII. 591-church bells, IV. 628—foundry of, IX. 844—great bell of Moscow, XW. 654—bap-tism of, IV. 426.

# BEL-BEL

Bell in architecture, III. 508
(ANDREW), D.D., IV 630—founder of Madras College at St Andrews, ib.; III. 136-his schools, XV 822

(BENJAMIN), surgeon, IV. 630.

(Sir Charles), IV. 630—his anatomical labours, II 767, 768—his work on the brain, 814-on the distinction of the nerves of sensation and motion, 814; XVII 676-on the nerves between the brain and muscles, II. 815—his Bridge-water Treatise, V. 864.

(Dr), of Manchester, VII. 594.

(GEORGE JOSEPH), professor of law, IV. 631.

(HENRY), mechanist, one of the first who employed steam in navigation, IV. 631.

(Capt. Henry), his translation of Luther's Collegua Mensaha, II. 740

(JOHN), of Antermony, FV. 681.

(JOHN), anatomist and surgeon, IV.

(Lieut.), his method of shooting a rope from a wrecked vessel, XIII. 440. - (M1), on lizards, XIX. 30

(Rev Patrick), his reaping-machine, IL 276

- (Thomas), on the teeth, III. 26on the three-toed sloth, XIV. 121, non the dentition of the mole, XVI 450. Bell-bird, XVI 750.

Bell-glass, XI. 248, 249 Bell-metal, IV. 627; V. 277; VI. 497cannons of, 181.

Bell-rock Lighthouse, IV 632, XIII 465; XX. 695 -- carrier-pigeons employed at, VI. 275—ravages of Limno-ria terebrans at, VII. 542—force of waves at, XI, 216.

Bell-towers, III. 449. Bell's Reaping-machine, IV. 632; II 276. Bella (Stefano de la), IV. 632. Belladenna. See Nightshade

Bellaggio, town in Lombardy, IV 632. Bellai (Guillaume du), IV. 632 Bellano, town in Lombardy, IV. 632.

Bellarmin on theology, XXI. 205 Bellarmino (Roberto), cardinal, IV. 632. Bellaspoor, in Northern India, IV. 632 Belleau (Remi), poet, IV 632. BELLEGARDE, French fortress, IV. 632.

Belle-Isle, French Island, IV. 632-capture of, by the British in 1760, V. 465. American Island, IV. 632.
 straits of, XVI 171.

BELLENDEN (John), IV 632tion of Boece's Chronicle, XVIII. 538. —— (WILLIAM), IV 635. BELLEROPHON, IV. 637.

genus of mellusks, XV. 375—fossil, XVII. 109.

Belles-Lettres, IV. 638-academies of,

Bellevois, painter, IV. 638. BELLEY, French town, IV. 638.

Bellinger (C. F.), on the spinal chord, II. 768-on the nerves of motion and sensation, 814. Bellini (Gentile), painter, IV. 638; XVII.

70. (GIOVANNI), IV. 688. (JACOPO), IV 638.

(Lorenzo), anatomist, FV 638; IL

(VINCENZIO), composer, IV. 638. Bellinurus, fossils, XVII 101.

Bellis, genus of plants, IV. 638; XI. 748. Bellman (Carl Michael), Swedish poet, XIX. 699.

Belloguet (Baron de), on the Celtic language, XVIL 530. BELLONA, IV. 638.

Bellori (Giovanni Pietro), IV. 638

Bellot (Lieut.), XVIII. 171, 173, 174.

BELLOWACI, IV. 638.
BELLOWS, IV. 638, 795; XVIII. 81—
common, IV. 795—single and double, ib -wooden, ib -circular, ib -anchorsmith's, III. 119-contrivance to prevent the noise of, 137—glass-blower's, IV. 792—water-bellows, XII. 183—hy-

#### BEL-BEN

Bells, electrical, IV 630; VIII. 537, 554. - hawk's, XI. 248, 249. Belluno, in Lombardy, IV. 638. Belly See Abdomen. Belodon, fossil reptiles, XVII. 141. BELOMANCY, IV. 638 BELON (Pierre), French naturalist, IV.
638—on fishes, XII 204, XIV, 124—on birds, XVI, 725. Belone, genus of fishes, XIL 264.

Belonostomus, genus of fossil fishes, XII

BELOGCHISTAN, IV. 639 Beloptera, fossil cuttle-fish, XVII 114. Belostoma, genus of insects, IX. 165 BELPER, in Derbyshire, IV 642 BELSHAM (Thomas, LL D.), IV. 642,

(WILLIAM), IV. 642,

BELSHAZZAR, IV. 642 BELT (Great and Lattle), IV. 642, 402, a kind of military girdle, IV. 643 Bel-tein, or Bel-tane, IV. 643, BELTS, in astronomy, IV. 643, 69-

chames, XIV. 397-friction of, 407. Belturbet, Irish town, IV. 643. Beluga, genus of mammalia, XIV. 228. See Whale. Belunum, IV 643.

Belus, now Nahr Naman, river, IV. 643.
temple of, at Babylon, IV. 341, 344, 345.

BELVEDERE, in architecture, IV. 643. - Neapolitan town, IV 643 Belvisiaceæ, nat. order of plants, V. 193. BELZONI (Giovanni Battısta), IV. 643-hıs explorations in Egypt, VIII, 502, 512in Nubia, XVI. 349.

BEM (Joseph), Hungarian general, IV. 643; XII. 24, 25

BEMBEA, or Bamba, IV. 643, 406. Bembecides, tribe of insects, IX 195. BEMBO (Pietro), cardinal, IV. 643 Bembras, genus of fishes, XII 282. Bembridge eccene rocks, XV, 211, 213, - Down, Isle of Wight, XXI. 861. BEN, or Benn, IV, 643,

BENACUS LACUS, now Lago di Garda, IV. 643.

BENARES, in Hindustan, IV. 643; XVI 301—trade of, XI 459—sepoy insurrection at, XVI. 309-luminous meteor seen near, XIV. 631.

BENAVIDIUS (Marcus Mantua), IV. 644. BENBECULA, island, IV. 644; XI. 278,

Benbow (Admiral), his gallant exploit and death, V. 447.

BENCH, IV. 644—Free, ib—Queen's, 1b—Common, 645; VII. 205—bribery of the, V 941

BENCHERS, IV. 645.

BENCOOLEN, IV. 645; XX, 806-Sir T. S. Raffles, governor of, XVIII. 750 Bend, in heraldry, IV. 645; XI. 327-

bend sinister, ib.

Bender, town in European Russia, IV. 645-taken by Prince Potemkin, XIX. 486.

BENDIDRIA, festival, IV. 645. BENDING, IV. 645. Bend-knot, XIX. 90. Bendlets, in heraldry, XI. 327, 328. BENDS, in a ship, IV, 645. BENDY, in heraldry, IV. 645; IX. 328. BENE, Sardinian city, IV. 645. Benedetto, his work on geometrical ana lysis, I. 552.

BENEDICITE, IV. 645. BENEDICT (St), founder of the Benedictine order of monks, IV. 645, XV. 408-his rules, IV. 646.

abbot of Peterborough, IV. 645.

XIV., pope, IV. 645.
Benedictures, IV. 645, VIII. 659—their love of learning and the arts, XIII.

BENEDICTION, IV 646.

Benee-Hasan, grottoes of, VIII. 504. Suweyf, Egyptian town, VIII. 503, BENEFICE, IV. 646—number of benefices in England and Wales, VIII. 743—number of, in which the incumbents are resident and non-resident, 744 value of, ib .- in commendam, IV. 647.

# BEN-BEN

BENEFICIARII, IV. 647 BENEFICIARY, IV 647. BENEFIELD (Sebastian), IV 647 BENEFIE OF CLERGY, IV. 647; VI. 764

—— SOCIETIES, IV 647, X. 309

BENEVENTO, Italian city, IV. 647; XX. 237, 258—deligation of, XVII 243.

Beneventum, battle of, XIX. 306.

Benevolence, sources of, I. 383-inward delight arising from the plactice of, overlooked by Bentham's followers, 396-deficient in the Asiatics, III 750 -principle of virtue placed in, XV 561, I. 357-sentiment of, XVII. 562 -in the deity, XXI 191, 215

Benevolent affections, difference between them and self-love, I 360—views of different authors on the subject, 296,

Benezet (Anthony), his opposition to the slave trade, XX. 321

Benfey on philology, XVII. 534.
BENGAL, IV 647, XI 463, 484, 523—
North-Western Provinces of, XVI 301 -Royal Asiatic Society of, III 759--Presidency of, XI. 529-English invested with the sovereignty of, 488, 515-mutiny in the army of, in 1857, XIV. 471, XVI. 301—imports of silk from, XX. 277

- BAY OF, IV 652 - lights, XVIII. 707.

Bengalee era, VI. 676—language, XIII. 207.

Bengalees, XI. 464. Bengel on the original text of the New Testament, XIX, 835

BENGUELA, African country, IV. 652; II. 227

Ben-himmon, XI. 532 Beni, river, IV 822

BENICARLO, Spanish city, IV 653. Benier, affair of, X. 227.

Beni Harb, Arabian tribe, III. 348. Shammar, Alabian tribe, III. 348.
Benin, country of Western Africa, IV. 653.

- Bight of, II 212, 226; XIII. 181. Beningsen (General), X. 145, 146, 147. BENISH-DAYS, IV. 653.

BENJAMIN, youngest son of Jacob, IV. 654.

(of Tudela), IV. 654; X. 469. Ben-muich-dhui, II. 32-botany of, V. 230

Bennati (Dr Francesco), on the human voice, XV. 708.

BENNET (Henry), Earl of Arlington, IV.

- (Dr Thomas), IV. 654 — (Mr), on electricity, VIII 564, 566 —his electrical doubler, 614—his goldleaf electrometer, 617-on the serpenteater, XVI 745-on several other birds, 767, 783, 799,

Bennett (Mr), on mollusks of the genus Glaucus, XV. 370, 371.

———— (Prof), his observations on the capillaries of a frog's foot, XVII 691. Ben-nuts and ben-oil, V. 190.

BENOIT (René), IV. 654. BENSERADE (Isaac de), IV. 654 BENSHEIM, IV. 654.

BENSON (George), IV. 654. Bentall's broadshare plough, IL 271 Bent-grass, a species of Agrostis, IV. 655. - sea (Arundo arenaria), its use in binding sand, II. 364.

Bentham (General), on Brunel's block-machinery, IV. 783, 784—his improve-ments in dockyaids, VIII. 76, 77, 83, 87.

(George), on forms of predication in logic, XIII. 585, n.
(JEREMY), IV. 655—on the law of nature, I. 92, 93—on blind veneration for antiquity, 95—his objections to the

word ought, 299-his Deontology, 300his supposed controversy between an ancient and modern moralist, ib .-- on the word utility, ib—on general rules for moral conduct, 303—Mackintosh's censure on him and his followers, 304character of him and his followers, 392, 398—his Fragment on Government, 393

-his tract on the Hard Labour Bill, ib -his Letters on Usury, ib.-his writ-

#### BEN-BER

ings on jurisprudence, 394-has not reached the most desirable distinction in ethical theory, 395-preaches the principle of utility with the zeal of a discoverer, 1b—confuses moral appro-bation with the moral qualities, 1b—his followers have overlooked the inward delight which arises from virtuous conduct, 396-his merit as a reformer of jurisprudence, 400—treats ethics too juridically, ib—coincides with the Epicureans in some points, ib -revolution which his style underwent, 401-Dumont's literary connection with, 402, VIII 241, 242-his Book of Fallacies, IX 476-criminal code of Brazil founded on his principles, V 296—on English government and laws, VIII. 765 et seq. on evidence, IX. 418-on the taking of oaths, XVI 399-his definition of "police," XVIII 183-on the security of property, 228—on penitentiaries, 570. BENTHAM (Thomas), bishop, IV. 656.

BENTINCK (William Henry Cavendish), Duke of Portland, IV. 656

(William G F. Cavendish), Lord George, IV. 656; V. 671

- (Lord William), Indian newspaper press under, XVI. 204—his intervention in the affairs of Sicily, XX. 262. Benticles, fishes, XII 281

BENTIVOGLIO (Giovanni), IV 656.

Guido), caidinal, IV 656

BENTLEY (Richard), IV. 657, XVII. 524 —his controversy respecting the Epistles of Phalans, IV. 188, XXI 933 his criticism on Le Cleic's edition of Menander, V 787—his quarrel with Burman, 788—Cumberland's work on the laws of Nature revised by, VII. 579 - his character as a scholar and critic, 586—on Homei—XI 599, n—Middleton's attacks on, XIV 809—Cunningham's strictures on his emendations of Horace, VII 586 -Sir Isaac Newton's letters to, XVI. 207, 208. - oak, XXI. 270.

Benueh, African river, X. 478-its identity with the Tchadda, ib BENZOIC ACID, IV. 660, VI 513. BENZOIN, IV. 660; V 198; XX. 804. Bêôn, Egyptian king, VIII. 457. Beranger, poetry of, XVIII. 117. BERAR, IV. 660

- Rajah of, XI, 504 Berard, his method of manufacturing alum, II 641-on heat, XI 263, 273on the solar spectrum, I 954, XVI.

593, 594—on the polarization of radiant heat, I. 956. - and Co, their purified coal, X.

320. Beraunite, mineral, XV. 101.

Berberidacem, nat. order of plants, V. 181.

Berberine, V. 181. BERBERIS, a genus of plants, IV. 660; V. 181, 128, 153

Berbers, an African race, IL 219, 226, 506; IX. 351; XV. 594—language of, XIII. 225.

BERBICE, IV. 660; XI. 81

- river in British Guiana, IV. 660; XI. 81. Berbir, Turkish town, X. 741.

BERCHEM (Nicholas), painter, IV. 660. BERCHETT (Peter), painter, IV. 660. BERCHTESGADEN, town in Bavaria, IV. 660.

BERDASH, IV. 660. Bere, or Bigg, II. 310-cultivated in Argyleshire, III 526

Forest, XI 203
BERECENTHIA, IV. 660.

Berehaven, in Cork, copper mines of, XXI, 769.

Berengar, XII. 644. BERENGARIANISM, IV. 660 Berengario (Giacomo), IV. 661 — his anatomical researches, II. 756, 760.

Berengelite, mineral, XV. 124. BERENICE, IV. 661; XI. 391; VII. 471; XII. 773.

# BER-BER

BERENICE, name of several cities, IV. 661. Beienice's hair, constellation, VII. 160;

Beresford (Marshal), V. 609.

BERLENNA, Russian river, IV. 661; XIX. 515—Napoleon's passage of, IV. 159; X 159.

Bereson gold mines, XV 230. BEREWICHA, IV 661 Berezoff, gold mine, XIX 550. BEREZOV, town in Siberia, IV. 661. BEREZOVSKOI, in Asiatic Russia, IV. 661 BERG, in Germany, IV 661. BERGA, Spanish town, IV 661.

BERGAMO, in Lombardy, IV 661. the ancient Pergamus, a city in Anatolia, IV. 662. See Pergamus.

Bergamor, IV. 662, V. 186—oil of, XVI. 496

Berge (F), his entomological works, IX.

BERGEN, in Norway, IV. 662, XVI. 329 -climate of, 323.

- ın Pomeranıa, IV. 662.

(De), his contributions to anato-

mical knowledge, II 765.

Berden-or-zoom, IV. 662—fortifications and sieges of, VII. 65—fortified by Cochorn, ib. IX. 815

Bergerac, in France, IV. 662.

(Cyrano de), his philosophical romance, II. 168.

Bergeron, tried for an attempt on the life of Louis Philippe, X. 208.

Beighaus, on the rivers of Asia and America, III 780, n. BERGHEM, IV. 662 See Berchem.

Bergner, on the persecution of Galileo, X. 377, n. 2.

Benghand (G. H.), on insects, IX. 11.

BERGMAN (Sir Torbern), IV 662—on alum, II 635—on the blowpipe, IV. 790, 791—on the nature of brutes, V. 702—his theory of crystallisation, VI 546, 551—on dyeing blue, VIII. 304 on cubes of salt, XIX. 584. -his theory of crystallisation, VII.

Bergmannite, mineral, XV. 75. Berg-mehl, or mountain-meal, XVII. 94.

BERGMOTE, IV 663. BERGOMUM, IV. 663

Bergstrasser (J. A. B.), his works on insects, IX 7

Berhampore, mutiny at, in 1857, XVI. 302.

BERIA, Berie, or Berry, IV, 663. Bening (Vitus), Danish poet, IV. 663. Benis, genus of insects, IX. 230. BERJA, in Spain, IV. 663.

Berkeley (George), bishop of Cloyne, IV. 663—his interview with Male-branche, I. 80—character of his genius, 163 - Pope's admination of, ib. -his sermons, 1b, n.—his popularity made metaphysics fashionable, 164—chief aım of his work on Vision, ib. - his doctrine of acquired perceptions unknown to the ancients, ib-merit of his new theory of vision not exclusively his own, 165—does not claim complete originality, 166 - sense in which he employs the word suggest, 167 and n. 2—his object in denying the existence of matter, 168—value he attached to his system of idealism, and the impression it produced, 168, 169-his theory of vision contains a great discovery in mental philosophy, 365—his speculations not sceptical, ib .- refutation of a fallacy in his work on vision, 244-his talents and virtues praised by all, 866 -his scheme for reclaiming the natives of North America, ib -made bishop of Cloyne, ib.—his patriotism with regard to Ireland, ib—his general principles of ethics, 367—his graceful and beautiful diction, 1b, 363-his writings produced the scepticism of Hume, 368notice of his Analyst, 650, 651, n. 1—his attack on the Newtonian calculus, IX. 676-on magnitude, XIV. 565-on abstraction, 591—on the non-existence of matter, 611, 612—theory of distance and magnitude, 578—Swift's letter to

#### BER-BER

Lord Carteret regarding, XV. 552-his description of a man of pleasure, 560 on wealth, XVIII 226, n 1

BERKELEY, town in Gloucestershire, IV 665—ship-canal, X. 680

— vale of, X. 679, 680.
— Castle, IV. 665; X. 682—murder of Edward II in, VIII. 682

Berkenhout (John), MD., his work on natural history, IX. 8

BERKHAMSTEAD (Great), IV. 665
BERKSHIRE, IV. 665—breed of pigs, II 255-56—population and value of property, VIII 754—old clothing towns of, XXI 915.

Berlèze, his work on insects, IX. 16.

BERLIN, IV 666—Royal Academy of Sciences at, II 64; XVIII 678—ob-servatory of, III 819—Royal Library of, XIII. 420-occupied by the French in 1806, X. 144—Napoleon's decree at, ib—porcelain factories at, XVIII. 436 -manufactures of, 670-meeting of provincial parliaments at, 659-university, 678, XXI. 492 — monument to Frederick the Great at, XVIII. 811 savings-bank, XIX 673.

BERMUE, in fortification, IV. 668; IX. 805 BERMUDAS, IV 668—spiders webs in, III. 375-Berkeley's project of a college in, IV 664

Berna (M), his experiments in magnetic somnambulism, XX. 429

Bernadotte, king of Sweden and Norway, IV. 669, X. 101, 102 et seg—elected crown prince of Sweden, XX. 859—his accession to the throne, 860.

BERNARD (St), abbot, IV. 669—crusade preached by, VII. 525.

(Dr EDWARD), IV. 669—his trans-

lation of part of a treatise of Apollo-nius, III. 301

(JAMES), IV. 669. (SINON), IV 670 (St), la Trappe, order of, in Waterford, XXI 768, 770

(the Great St), mountain in Switzerland, IV. 670; II 624, XXI. 504-Napoleon's passage of, X. 118

hospice of, IV. 670; II. 625teorological observations at, I 944. - (Messrs and Co), their method of purifying coal, X 320.

Bernardin (Genga), on anatomy, II 766 Bernardine (St), of Siena, IV. 670 BERNARDINES, order of monks, IV 670. Bernaido de Brita, on Lusitanian wools, XXI 910.

BERNAY, in France, IV. 670.

BERNBURG, IV. 670.

BERNE, in Switzerland, IV. 670, 671; XX 882 - average temperature of, 889 coins of, XV. 441, 443

- machine, IV 671. Bernera, island, IV. 671. Berners (Juliana), IV 671; III. 162 Bernese Alps, XXI. 504

Bernesque poetry, XVIII 111. BERNEVILLE (Glebert de), IV 671 BERNHARDI (August Friedrich), IV 671

BERNI (Francesco), IV. 671; XVIII 112.
Bernicla, genus of birds, XVI. 816
BERNICLE, bird, IV. 671; XVI. 816
— shell, IV 671. See Barnacle
BERNIEE (Nicholas), IV 671.

- (Francois), IV. 671-his writings, I. 108, n. 2—on burying treasure in the East, XVIII. 471.

Bernieres (M.), his large burning lens,

VL 14. BERNIER'S ISLAND, IV. 671.

BERNINI (Giovanni Lorenzo), IV 671— his style of architecture, III. 453; of sculpture, XIX 863.

BERNON, abbot, IV. 671.

BERNOULLI, family of the, IV. 672; IX

(DANIEL), IV. 675 — sketch of his life and character, I. 723, n. 2—on hydrodynamics, 723; XII. 71, 72, 159—singularly happy in the sober ap-plication of analysis, 724—established the true theory of the vibrations of a

# BER-BER

musical chord, 728-on the gradation musical chord, 728—on one graduation of atmospheric density, IV 464—on the resolution of forces, VIII. 335—on the laws of motion, VI 254—his dipping needle, XIV 85—on probability, XVIII. 603-on the elastic curve, XX. 762on the theory of the tides, I 816.

Bernoulli (James), IV. 672-an able coadjutor of Leibnitz in illustrating the new analysis, I 636—difficult problems in the infinitesimal analysis solved by, 645 -works of, 646-his ingenious mode of treating the problem of the centre of oscillation, 719-sketch of his life and character, ib, n. 4-his formulæ for the chords of multiple arcs, II 555—in capillary attraction, XII 92—on probability, XVIII 589—his problem of the elastic curve, XX 762 his experiments on lute-strings, 763-on the calculus of variations, VI. 68. (JAMES), secundus, IV 676.

(John), IV. 673-an able coadjutor of Leibnitz in illustrating the new analysis, I 636—his judgment on the controversy between Newton and Leibnitz, 638-solution of questions by, 639 -by the introduction of exponential equations, he materially improved a branch of the calculus, 645-works of, 646-was the first who fully enunciated the proposition of the equality of opposite momenta, 651-his prize essay on motion, 658-his part in the controversy respecting motion, 654, 655-simplified the science of equilibrium or statics by the principle of virtual velocities, 719-his principle styled the conservation of living forces, ib.—sketch of his life and character, ib, n. 1quotation from his defence of Leibnitz's law of continuity, 133, n. 1-had perceived the truth of the law of contimuty before communicating with Leibnitz, 258—his formula for the chords of multiple arcs, II 555-his barometer, IV 454-his singular boast as to the demonstration of the inverse problem of centrapetal forces, VIII. 363—Keill and Brooke Taylor's challenge to, IX. 675—on hydrodynamics, XII 72—his intimacy with Euler, IX. 372, with Leibnitz, 675-on projectiles XVIII 67, 68, 69-on the calculus of variations and exponentials, VI. 68. (JOHN), secundus, IV. 676.

(John), tertius, IV. 676. (NICHOLAS), IV 674. Nicholas), secundus, IV. 676. BERNSTADT, in Silesia, IV. 677
Bernstorff, Danish family, VII. 742.
BERGE, zoophyte, IV. 677; XXL 1000, 1001.

BERGA, IV. 677. Beroidæ, family of zoophytes, XXI. 1001. BEROSUS, IV. 677-dial of, VII. 772. Berra (Signor) on Lombardy, XIII. 651, 652.

BERRE, French town, IV. 677. Berres (Joseph), his microscopical ana-

tomy, II. 769 Berretini da Cortona (Pietro), Italian painter, IV. 677.

BERRETONI (Nicolo), painter, IV. 677. Bern (Duke of), assassination of, X. 181 -funeral, 182.

Ouchess of), X. 206, 207.
Berry, in botany, V. 138—trees and shrubs producing, XVII. 768.

French province, X. 277.
Head, XXI. 311.

Berryer (M), X. 197 et seq., 223-on the credit mobilier, XV. 290. BERSARII, IV 677.

Berthier (General), X. 108 et seq. Berthierite, mineral, XV. 119.

Berthier's analysis of ironstones, XII. 540. BERTHOLLET (Claude Louis), IV. 677-first to employ oxymuriatic acid in bleaching, I. 589, IV 758, 759—on the composition of the atmosphere, 180—his work on dyeing, VIII. 274—his gunpowder from chlorate of potash, XI.

#### BER-BET

158—on the action of light on metallic oxides, XIII. 459-mesmerism rejected by, XX. 419.

BERTHOLLETIA, genus of plants, IV. 677; V 192, 299.

Berthon (Rev. E. L.), his hie-boat, XIII. 447

BERTHOUD (Ferdinand), IV. 678 Bertan (M), on diamagnetism, XIV. 30, 31; XVI. 675

BERTINORO, IV 678.

Bertoloni (G), his works on insects, IX.

Bertolotti, his work on the flea, IX. 18. Bertou (M), on Tyre, XXI. 404 Bertram (Mr), his mode of welding iron beams, XX. 195

Bertrand (General), X. 161, 164.

(M), his account of Deleuze's work on animal magnetism, XX. 425,

426, 427, his work on, 428. Bertsch (M), his microscopic photographs, XIV. 801

Bervie, in Kincardineshire, XII. 437; XIII. 89

Berwens, mountains in Wales, VII. 735 BERWICK (the Duke of), IV 678

(NORTH), IV 681—Law, XI 177

on Tweed, IV. 681 - diminished mortality in, owing to sanitary improvements, XIX. 604.

- SHIRE, IV. 678-system of feeding horses, II 340—system of farming in, XIX 798—agricultural statistics, 796,

797, 798—population, 799
BERTI, IV 682; XV. 88; XVII. 628—
specific gravity of, XII. 88—dichroism
in, XVI. 666—in Brazil, V. 298. See

Berytus. See Beyrout. Beryx, genus of fishes, XII. 279—of fossil fishes, 343.

Berzelute, XV 96.

BERZELINE, mineral, IV. 688; XV. 118. BERZELITE, mineral, IV. 683; XV. 105. BERZELIUS (Baron Jan Jacob), IV 683;

I 969, n 3 - on electro-chemical decompositions, 968-on alum, II 635analysis of bone, 827; of marrow, 828 eminence of his school as analysts. I. 969 - made no single discovery of commanding importance, 969, n 3— his arrangement of minerals, XV 67— first published an account of sealingwax, XXI. 799-his method of increasing the power of a galvanic battery,

611 Besançon, French city, IV. 684, VIII. 114—canal of, X. 244—population, 277—Academy of, XXI 491.

BESANT, or Bezant, gold com, IV. 685, VII. 71.

m heraldry, XI. 325.
Beskow (Bernhard von), XIX. 700-

the literature of Sweden, 696.

BESOZZI (Ambrogio), painter, IV. 685.

BESSARABIA, IV. 685; XIX. 521—wine made in, XXI 886.

BESSARION (John), archbishop of Nice, IV 685.

BESSEL (F Wilhelm), IV. 685-his early labours, I 848-his Fundamenta Astronomiæ and other works, ib, 849-his observations on the star 61 Cygni, 864; IV. 96-on the proper motion of the stars, 82, 83-on the planet Jupiter, 91 Saturn, 92-on the pendulum, I. 853on comets, 856, 857, 858-his connection with the Koningsberg Observatory, III. 819—on the parallax of fixed stars,

Bessemer (H.), his account of his system for manufacturing iron and steel, XII. 555-remarks on that system, 574.

BESSI, IV. 685 Bessus, XVII 434—Darius killed by, XIII. 768—vanquished and put to death, 769. BESTAIL, or Bestial, IV. 685.

BESTIARII, IV. 685 Beszterczebanya, town in Hungary, XVI.

Betancourt (General de), his design for a roof, XIX. 394,

# BET-BEY

Betancourt (M.), his experiments on the force of steam, XX 557.

Betanzos, Spanish town, X 378.

BETCHUANA, nation in Southern Africa,

IV. 685.

BETEL, IV 685-betel-nut, V. 214-betelpepper, XVII. 404.

Betel-nut island, XVIII 516. BETHABARA, IV. 686.

BETHANY, IV. 686-residence of Lazarus, XIV. 329.

ETHEL, IV. 686
Bethell (Mr), his method of preserving timber, V. 178; VIII. 213, n; XXI 279.

BETHESDA, IV. 686.

BETH-HORON, IV 687.
BETHLEHEM, IV. 687; XII. 758 — wine made at, XXI. 886.

BETHPHAGE, IV 687. BETHSAIDA, IV 687; XVII 186. BETHSHAN, IV 687.

BETHULIA, IV. 687.

BETHUNE (Maximilien de), IV. 687. See Sully.

town in France, IV. 687. (Sir H. Lindsay), XVII. 428. BETHYLUS, genus of birds, IV. 687; XVI.

genus of insects, IX. 193.
BETLIS, or Bitlis, in Turkish Armema, IV.

Beton, artificial concrete for walls, XL 221

BETROTHMENT, IV. 688; V 847. Betta, genus of fishes, XII. 290.

BETTERTON (Thomas), actor, IV. 688; XXI 171, 178, 174 BETTINELLI (Xavier), IV 688

Betting-houses, law for the suppression of X. 395

BETULA, a genus of plants, IV. 689; V. 208.

Betulaceæ, nat. order of plants, V. 208 BETULEIUS (Sixtus), IV 689. BETWAH, river in Hindustan, IV. 689. BEUDANT (François-Sulpice), IV. 689.

Beudantite, mineral, XV 102.
Beukels, his discovery of the mode of curing herring, XL 583. BEUTELSPACH, town in Wirtemburg, IV

689 BEUTHEN, in Silesia, IV 689.

Bevan (Dr Edward), on the honey-bee, TV 588 BEVEL, IV. 689-bevel-angle, ib .- bevel-

wheels, XIV. 396-bevellings, in shipbuilding, XX. 184. BEVELAND (North and South), IV. 689.

BEVERAGE, IV. 689. BEVERIDGE (William), bishop, IV. 689-his work on canon law, VI. 189.

BEVERLEY, town in Yorkshire, IV. 690 XXI 959—minster of, its architectural merits, III 481, 482, 483, 516. - in Massachusetts, IV. 690.

(JOHN OF), archbishop of York, in the eighth century, IV. 690. Beville, in heraldry, IV 690. BEVIN (Elway), musician, IV 690 BEWDLEY, town in Worcestershire, IV

Bewick (Thomas), IV. 690—on Butish birds, XVI. 733, 818—his wood-engrav-ings, XXI. 904.

(John), his wood-engravings, XXI.

BEWITS, in falconry, IV. 690. Bex, saltspring at, XXL 531.

Bey (Linant), on the sources of the White Nile, XVI. 269.

IV. 690—massacres of the Egyptian Beys, VIII 489, 492. BEYAH, river in India, IV. 690. Beybars, VIII. 484.

Beyer on rare books, IV. 709.

Peacock, and Co., goods locomotive engine made by, XX. 615.
BEYKANEER, in Hindustan, IV. 690, 509. BEYRA, or Beira, IV. 691.

# BEY-BIB

BEYRAMICH, in Asia Minor, IV 691. Beyrichia, fossils, XVII. 101. BETROUT, or Beirout, anciently Berytus, in Syria, IV. 691; VI. 746; XX. 905 reduced by the allies in 1840, V. 668. BEYS (Gles), printer, IV 692
BEZA (Theodore), IV. 692—his life of Calvin, VI 107, 109, 111—his New Testament, IV. 698; XIX. 837—Codex Bezæ, ment, IV. 1955, Alta. XXI. 205
838—on original sin, XXI. 205
Bezant, gold coin, IV 685, VII. 71.
BEZIERS, French city, IV 692
BEZOAR, IV. 693—bezoar goat, XIV 211. BEZOAR, 1V. 073—DEZOAR GUBA, ATV 211.

Bezoardica glauca, mollusk, XV 356.

Bezout (Stephen), notice of his life and writings, I. 712, n 1—on problems in seamanship, XX. 5, 9. BHADRINATH, in Hindustan, IV 693. Bhageelettee, or Ganges, X 400 Bhanras, Nepaulese tribe, XVI. 144. Bhars, Indian tribe, XVII 18 Bhascara, Hindoo algebrast, II. 487. Bhatcan, in Hindustan, IV. 693. Bhatts, Indian tribe, XI. 91, 466; XVIII. BHEELS, IV. 693; XL 92, 466-mutiny of, m 1857, XVI. 314. Bhooj, VII. 598. Bhootias, Nepaulese tribe, XVI. 144. Bhoral, animal in Tibet, XXI. 247 BHURTPORE, in Hindustan, IV. 693of, XI. 505, 508; XII. 701. BIAFRA, COUNTRY IN AFRICA, IV. 694. bight of, IV, 694; II 212,
BIALYSTOCK, IV. 694
Biancamano (Umberto), XIX 641,
BIANCHI (FIANCESCO), IV 694. and Neri, Italian faction, XII 649 BIANCHINI (Francis), IV. 694-on the planet Venus, 65 Bianco, Cape, XX. 245. BIAR, Spanish town, IV. 694. BIARCHUS, IV. 694. BIAS, one of the seven sages of Greece, IV. 694. - of the mind, IV. 694. Biaxal crystals, discovery of, I. 913—theory of, 905. See Crystals. Bib, fish, XIL 269. Bibars, sultan, XVII 197. Bibbiena, Italian comic writer, VIII, 148.

Bibio, genus of insects, IX, 230. Bible, IV 694—Alexandrian MS, II 474 -variations in the copies of Moses writings as to antediluvian chronology, III. 267—on the principle on which the Bible ought to be studied and understood, I, 455—Apocrypha, III. 297; XIX. 838; XII. 761—divination by means of, IV. 717—first edition printed means of, IV. 717—niss scutton printer with moveable metallic types, 708; XVIII. 529—Castellios' Latin and French translation, VI. 321—Bowyer's Greek Testament, V. 252—B. Boyle's exertions for translation and diffusion of, 259-its sufficiency as a guide to salvation maintained by the dissenters in 1772, 474—concordances of the, VL 66; VIL 228, 523—the canon, VI 188; VIII. 371.—Walton's polyglof, IV. 707; XXI. 695.—Douay edition of, VIII. 113.—chronological discrepancy of the Hebrew, Samaritan, and Greek texts, VL 668 - Clermont's MS. of Paul's Epistles, 765—deutero-canonical books, VII. 761—Sir W. Drummond on the historical books of the Old Testament, VIII. 195-its perusal first permitted and afterwards prohibited by Henry VIII. 706—opinions of the Ebionites concerning the canon, 369-Erasmus's edition of the New Testament, IX. 322 -Jerome's, or the vulgate version of. XII. 728-Galileo on Science and Scripture, X. 377, n. 2-Geddes's translation of the, 444—Grotius's annotations on the, XI 69, 70—Origen's Hexapla, 364—the Septnagint, IV. 698; XII 768; XVII. 519-Kennicott's Hebrew Bible, XIII. 64—collation of MSS., ib.—Kitto's BEDENCOPF, IV. 719, Pictorial Bible, 104—Geneva Bible, 127 Biela's comet, IV. 76, 94.

BIBERACE, town in Wurtemberg, IV. 694, BIBIENA (Ferdinando, Galli), IV. 694

# BIB-BIE

- Lachmann's New Testament and Vulgate, 147-Luther's translation of, 729 - Magyar versions of, XII 19-Mohammed had no real acquaintance with, XV. 299-Rabbinical Bible, XIX. in reference to philology, XVII 518, 519—Pagninus's translation of, 44 palimpsest MSS. of, 208—polyglot editions, XVIII 266, XXI 951-poetical books of, XVIII. 97—Popish opinions respecting, 337—Biblia Pauperum, or Poor Man's Bible, 523, 533, Plate, IV 708; Mazarine Bible, XVIII 529—early English editions, 537—incorrect English editions, 543-Hebrew editions, XIX 835—ancient Valdensian copy of the New Testament, XXI. 510—Valdo's exertions to translate and circulate, ib

Tyndale's, 400—Wetstein on the various readings of the New Testament, 845—his New Testament, 1b —Wychffe's translation of, 946, extract from his version, VIII. 795 See Old and New Testament, Holy Scriptures, Septuagint, Taigum, Theology, Revelation
BIBLE SOCIETIES, IV 703—in Dublin,
VIII 225 London, XIII. 666—New

York, XVI. 280—American Bible So-ciety, XXI. 422

BIBLIANDER (Theodore), IV 704 Biblical criticism, works on, XIX. 828.
Bibliography, IV. 704—booksellers' marks or signs, V 30—form of, and manner of writing ancient books, VIII 42—Dibdin on, 7—Dryander's Catalogue of Sir Joseph Banks' Library of Natural History, 201; IV. 714-Gesner's Bibliothèque Universelle, X. 597. See Books, Libiaries, Printing.

BIBLIOMANOY, IV. 717. Bibliomania, IV, 714, BIBLIOTHECA, IV. 717 Bibliothèque Universelle, X. 597. Biblis, genus of insects, IX. 208. Bibronia, genus of fishes, XII. 304. Bicanere, IV. 690.

BICE, or Bise, IV. 717 BICESTER, or Bisseter, in Oxfordshire, IV

Bichar (Marie-François-Xavier), IV. 717
—his anatomical works, II 767; III
73—on fat, II. 788—on the arteries, 790 -on the years, 793, 794, 796-on the capillary system, 796, 798-on the exhalants, 802-on the lymphatics, 804 -on the lymphatic glands, 806-on the nerves, 806 et seq.—on the ligaments, 828, 824—on cartilage, 832—on fibrocartilage, 832—on the skin, 834—on the mucous membrane, 836, 837-on the serous membrane, 839—on the synovial membrane, 1b -on the heart, III. 64 Bichromate process, in photography, XVII. 550.

Bickford's Devonshire system of irrigation, XII. 614.

Bicuspid teeth, in man, III. 25. BIDAL, or Bidale, IV 718 BIDASOA, river, IV. 718; XX. 488. Bidder (Mr), mon-bridge erected by, XII. 600—on ralways, XVIII. 798. Bidding Prayer, IV. 718.

BIDDLE (John), Socialen writer, IV. 718. Biddle's scarifier, II 272.

BIDDOOMAHS, or Biddumas, African tribe, IV. 719—visited by Dr Overweg, IL 214 inhabit the islands of Lake Tchad,

BIDEFORD, in Devonshire, IV. 719. 

BIDENTAL, IV. 719. BIDET, IV. 719.

BIDIZEI, Spartan magistrates, IV. 719. BIDLOO (Gottfried), IV 719—his anatomical publications, 764

Bidone (George), on hydrodynamics, XIL 75, 152, 153, BIDPAI, or Pilpay, Hindu author, IV. 719. BIDSCHOW (New), in Bohemia, IV. 719. Bieberite, mineral, XV. 98.

# BIE-BIN

BIELEFELD, in Westphalia, IV 719 BIELITZ, in Silesia, IV. 719. BIELLA, IV 719 Bienne (Lake of), XX. 889 Biennial plants, XI 750; V. 77. BIER, IV 719 Biesbosch, lake in Holland, XI. 581 Biferno, river, XX. 238 Bifeons, IV. 719 Big, species of bailey, V 320-its loss in malting, 324 Biga, or Bigm, ancient chariot, IV 719

VI 422. BIGAMY, IV. 719

BIGBONE-LICK, a district in Kentincky, IV 720, XIII 69. BIGGAR, in Lanarkshire, IV 720

BIGGLESWADE, in Bedfordshiie, IV 721 BIGHORN RIVER, in North America, IV 721

BIGHT, IV 721 Bignon (Jerome), IV 721

- (M), on the policy of Napoleon, X. 128-on Napoleon's opposition to the Czar's views upon Turkey, 153 - his motion on Poland, 205

BIGNONIA, a genus of shrubs, IV 721; V. 200. Bignoniaceze, nat. order of plants, V 200

BIGOT, IV 721 Bija Gannita, Hindoo treatize on algebra,

II 487, 488. BIJANAGUR, IV. 721

Bilbao, or Bilboa, Spanish city, IV. 721—sieges of, in 1835 and 1836, XX. 478,

479—river, 488
Bilberry, V 198
Bilbeys, Egyptian town, VIII 498 See
Belbeis.

Bilbilis, VI 66 BILBOES, IV 722 BILDERDYK (Willem), IV. 722. BILDULGERID, or Bled-el-jereede, IV. 722,

771.

Bile, II. 782; VI 520, 521—composition and functions of, XVII 666—of inserts, IX. 52.

BILFINGER (Georg Bernhard), IV. 722. BILEE, of a ship, IV. 722—of a cask, ib Bilm, polishing slate of, XVII 94, 588 Bilphim, colouring matter of bile, XVII 666.

BILL, different applications of the word, IV. 722, 723—of lading, 722—in Parliament, ib , XVII 301—in commerce, IV. 722-distinction between real and accommodation bills, XV 471 — bad effects of discounting those of long dates, ib.—discount charged on, by the Bank of England, 472—discounted by the Bank of France, 490

Billberg (J. G.), his entomological works, IX 15.

Bill-book, in book-keeping, V. 19. BILLERICAY, town in Essex, IV. 723 BILLET, in heraldry, IV. 723; XI. 880. BILLETING, IV. 723.

BILLETON, East Indian Island, IV. 723 BILLIARDS, IV. 723. Billings (R. W.), on the architectural re-

mains of Scotland, III 503. (Capt), his voyage of discovery,

TT 465. Billingsgate market, XIII 664—fish sold at, IX. 649, n. 3

Billingsley's boring machine, V 43.
Brilon, IV 724, XVI 353.
(Thomas), II. 745

BILLS, of Exchange, IV. 722; V. 19, VII 488 — distinction between them and paper-money, XV. 446—history of, IX. 442—fictitious, 429, VII 489—negotia-tion of, 443—laws of, 445.

Exchequer, IX. 447. of mortality, IV 722; XV. 600. BILMA, African town, IV. 724. BILSAH, town in Hindustan, IV. 724. BILSON (Thomas), bishop, IV. 724. BILSTON, in Staffordshire, IV. 724. Biluchi tribes, XX. 306. Bima, in Sumbawa, XX. 806. Bimana, IL 774. BIN, IV. 724.

# BIN—BIR

BINACLE, IV. 724 BINARY ARITHMETIC, IV. 724 - measure, 725, system in France, XXI. 811number, IV 725-compounds of minerals with oxygen, XV. 61-combinations of metals, in thermo-electricity, XXI 650

Binchester, Roman station at, VIII. 267. Bindwead, V 201 Bingen, IV 725

BINGHAM (Joseph), IV 725.

m Nottinghamshire, IV 725.
BINGLEY, in Yorkshire, IV 725; XX. 958. - (Mr), on the ox, XIV. 214. BINK (Jacob), IV 725

Binkendon (Capt), on fossil foot-prints, XVIL 130

Binney (Mr), on fossil plants, V 235, 236 on the minerals of Lancashire, XIII. 179.

- (Hon. Horace), on Washington's Farewell Address, XXI 759. Binning, his account of Persia, XVII. 421

et seq Binny, freestone of, XIII 497 Binocular perspective, XVII. 449.

- telescopes, XXI 133. BINOMIAL, IV. 725; II 530, IX. 285. Binothris, Egyptian king, VIII. 454. Bintang, island, IV 725

DISTANG, ISIAND, IV 725
Biodio, INVEY IN Chile, VI 543
BIOGRAPHY, IV 725, XI 586—Boswell as
a writer of, V. 64.
BIOLOGY, IV 726, II 748

Bion, of Smyrna, IV. 726

Borysthenites, IV. 726 Biot (M.), his life and researches, I 916character of his researches, 917-on the transmission of sound, II. 99, 101—on the rotatory action of fluids, I 910—his ascent in a balloon, IL 181, 184-his epigrammatic description of Cavendish, I. 931—his allegation in reference to Galileo, IV 449, n 2—on the law of the tints in biaxel crystals, I 914—on barometrical measurements, IV. 465-on chromatics, VI 652 et seq — on ancient Chinese books, VII 244—on electricity, VIII. 531, 552, 556, 580—on the transmission of heat, XI 261; I 946—his connection with the measurement of the French arc of meridian, 837 — on electrical light, VIII 546, 547—his explanation of Lichtenbeig's electrical figures, 606—on mirage, XIV. 683—on magnetism, 7, 23, 26, 27, 63-his artificial magnets, his account of the meteoric stones of L'Aigle, 632-on optics, XVI 538, 627, 650, 651, 676, 680 et seq.; I 910, 917-his formula representing the relation of the pressure and temperature of steam, XX. 564—on electro-chemical decomposition, XXI 628.

Biotite, mineral, XV. 78. Bioxiphus, Egyptian deity, XI 386. Bipartiti, section of insects, IX. 85. BIPES, genus of reptiles, IV. 726, XIX.

BIQUADRATE, IV. 726 BIQUADRATIC EQUATION, IV. 726; II. 520
—Parabola—Power—Root, IV. 726. Bir, or Beer, town in Asiatic Turkey, IV.

726, 589. Birbeck (Mr), on the state of the small agriculturists in France, VII 433.

BIRBHOOM, in Hindustan, IV. 726, 651. BIRCH (Dr Thomas), IV. 726—his collection of works on human mortality, XV. 602.

- (Mr), on hieroglyphics, XI. 409, 431 - on Cheremon's work on hieroglyphics, 411.

(Mr), on ancient pottery, XVIII.

- IV. 726, V. 208; XVII 759, 765 -bark, in dyeing, VIII. 308-oil of, XVI. 496-its wood used for bobbins, XII 438-as a tumber-tree, XXI 278

order of plants, V. 208.
BIRD (William), IV. 727; XXL 15. IV. 727-structure of birds, XVL 734-as articles of food, IX. 762-plumage, XVI. 735 - poisonous species,

### BIR—BIS

XIV. 439-fossil, XVII. 154-number known, 631-injuries from, XXI. 548. See Ornithology.

Bird (Dr Golding), on magneto-electri-city, XXI 648—his decomposing battery, 620.

(Mr), on weights and measures, XXL 799, 802

(Mr), painter, Turner's kindness to, XXL 387.

Bird-catching spiders, III. 377

Bird-cherry, XVII. 763. Bird-lime, IV. 727 Birds, in heraldry, IV 727, XI 333. Bird's astronomical instruments, III. 808 BIRDS'-EYE VIEW, IV. 727.

- tobacco, XXI. 295 Birds'-Nests, edible, IV 727; III 125, XIL 710; VII. 48.

BIREN, IV 727; III. 214, XIX 481, 482 Birge (Juste), XIII. 553.

Birger Jarl, founder of Stockholm, XX.

BIRGUS, a species of crab, IV 727
BIRKBECK (George), IV. 727—his share
in the establishment of mechanics' institutions, XV. 824

BIRKENHEAD (S11 John), IV. 727; XVI.

town in Cheshue, IV 727—docks, XIII 519

METRIC TERROUN, the ancient lake McCis, IV 729, VIII 429

MARIOUTE, the ancient Palus Mareous, IV. 729; IL 469; VIII 429 and

Birket-el-Saba, viaduct, XIL 609, 610 Birkmyre's estimate of the production of the precious metals, in different coun-

tries, XVIII 461, n BIRMAH, IV 729 See Burmah. BIRMINGHAM, IV 729—Soho, near, V 246

-riots at, in 1791, 539; XVIII 514 -roof of the theatre of, VI 266 Deaf and Dumb Asylum at, VII. 686—hardware manufactures of, VIII 729— Birmingham and Worcester canal, XXI 928-process of making gun-barrels at, XI. 96-roof over the joint railway sta tion at, XIX. 399-gun-trade of, XI. 100 -Leland's notice of, XIV. 284 steel-pens manufactured at, XVII. 400 -post-office statistics, XVIII 416--cruelties practised in the borough mingham Railway, 760, 774, 794; Birmingham and Gloucester, 795; XX. 928-canal XXI 738-rent of land in the neighbourhood of, 739-population, ib

BIRON (Armand de Gontault), Lord of, IV. 732.

- (CHARLES DE GONTAULT), TV. 732.

(Lord), V. 404
BIRR, IV 732. See Parsonstown.
BIRS NIMBUD, IV. 732, 343.

Birs, Swiss river, XX. 888

Birt (Mr), on atmospheric waves, XIV.

Births, in England, in 1852, VIII 756rate per cent in England, XV 649— illegitimate, in various European states, IV. 494; and in large towns, ib .-- proportion of males to females, XVIII 588-registration of, 831-their number dependent on the number of deaths, 348—in Scotland, XIX. 800— Switzerland, XX, 890

Birthwort order of plants, V. 205.

— plant, V. 127, 154
Birtley, salt-spring at, VIII 266

BISACCIA, Neapolitan city, IV 732 BISACUTA, IV. 782. Bisayan islands, XVII 512.

BISCARA, town in Algeria, IV. 732 BISCAY, province in the north of Spain, IV. 732-language of, XIII 214-wines of, XXI. 884 See Cantabria.

- BAY OF, IV. 783. BISCEGLIA, Neapolitan city, IV. 733. Bischof, on rocks, XV. 138, 142 et seq. on pseudomorphism in rocks, 152. Bischop, or Biskop (John de), IV. 733.

#### BIS-BIX

BISCHWILLER, French town, IV. 733
BISCUIT, IV. 733—manufacture of, for the navy, 378.

- in pottery and porcelain manufac ture, XVIII, 442 BISHAREEN, IV. 733

788-difference between the BISHOP, IV bishops of apostolic and of later times I 526 — universal bishop, XI 33 identical with presbyter, XVIII 482, 487—English, VIII. 743—their title to a seat in the House of Lords, 767-French, X. 243, 267 — Godwin's catalogue of English bishops, 691 See

Episcopacy BISHOP AUCKLAND, IV. 734, 236-castle of, VIII. 267.

BISHOPING, IV. 735. Bishopines, English, VIII. 743—Irish, XII. 530-early Scottish, XIX 749

BISHOP'S COURT, IV 734.

Bible, the, IV 703

CASTLE, town in Shropshire, IV

 Stortford, town in Hertfordshire, IV. 735

Waltham, town in Hampshire, IV.

WEARMOUTH, in Duiham, IV. 735. See Sunderland Bisignano, Neapolitan city, IV. 735

Bi-Situn, sculptures on, XVII. 433 BISLEY, in Gloucesteishire, IV. 735

Bismark (Count), on the military character of the French, III. 642 BISMILLAH, IV. 735

BISMUTH, IV 735, VI 496; XV. 65, 114
— cupreous, 121— poisonous nature
of the sub-nitrate of, XIV 434—magnetism of, 27-specific gravity of, XIL 88-in Cornwall, VII. 407-cohesion of, XX, 757.

Bismuth-ochre, XV. 112 Bismuthic silver, XV 121. Bismuthine, mineral, XV. 119 Bismuthite, mineral, XV. 107

BISOMUM, IV 785. BISON, IV 735; XIV. 214, XVII. 632fossil, 170.

Bissagos, African islands, IV. 735; V.

BISSAT (Patrick), IV 735. Bisset (Charles), on fortification, IX. 816. Bissextile Year, IV 735; VI. 77.

BISTOURY, surgical instrument, IV. 735;

BISTRE, IV. 735—drawing in, VIII 173 Bisulphuret of hydrogen, VI 477—of carbon, 478. BISUTUN, IV. 735.

BISZTRITZ, in Transylvania, IV 735. BITCHE, in France, IV 735.

BITHYNIA, province in Asia Minor, IV 736—monarchy of, XV. 412—coins of, XVI. 374

Bithynus, genus of insects, IX. 153, BITLIS, IV. 736 See Beths Bitolia, town in Turkey, XV 415, Bitoma, genus of insects, IX. 142. Biton, VI. 762.

BITONTO, IV 736 Bittacus, genus of insects, IX 177. Bitter spar, XV 92

BITTERFELD, in Saxony, IV. 736. BITTERN, bind, IV. 786; XVI 799. Bittersweet, V 201 Bitterwood, V. 189

BITTS, IV. 786.

BITUMEN, IV. 736; XV 123—B Judai-cum. III. 762—on the shores of the Dead Sea, 761 - specific gravity of, XII. 89-elastic, XV. 124, in Derbyshire, VII 755-its use in building, in Assyria, III. 501, n—fountains of, at Hit, XI 549—in Persia, XVII. 422.

Bituminous cements, XX. 715. - shale, II 638; XV. 83-employed in the manufacture of alum, IL 637, 640

BIVALVE, IV. 736; XV. 340, 341-fossil bivalves, XVII 105, 106. BIVOUAC, IV. 736.

Bixacess, nat. order of plants, V. 183.

#### BIZ-BLA

BIZARI (Pietro), IV 737 BIZERTA, or Benzert, in Tunis, IV 737. BLABY, in Leicestershire, IV 737.

BLACK (Dr Joseph), IV 737-his discovery of latent heat, I. 760, 926; XI 269; of specific heat, I. 926—his discovery of fixed air, 925-his intimacy with Dr Hutton, 928-contrasted with Hutton, ib. - death, ib -his experiment illustrative of the theory of balloons, IL 170—sketch of his life and discoveries, I 925-928-his patronage of, and intimacy with, Watt, 866, 867, XXL 774 his blow-pipe, IV. 790—his portable furnace, X 357

- (William), on the influence of electricity on fermentation, V 319, 329on kıln-drying malt, 323—his description of fermentation, 329.

colour, IV 740-dyeing of, VIII. 304, 319-varieties of, in mineralogy, XV 59-people of that colour, VII. 222. Act-Acts, IV 740

FOREST, in Suabia, IV 740, 360ın Wurtemberg, XXL 938, 939, 940 - MAIL, IV. 740-levied on wool mei-

chants, XXI 908 River, in Wisconsin, XXI 893. SEA, IV. 740, IX. 385. See Eux-

thorn, XVIL 760. Black-ball in wheat, II 306 Black-band, iron ore, XII. 540. BLACK-BIRD, IV. 740; XVI. 751. BLACK-BOOK of the Exchequer, IV 740 See England.

BLACK-BOOKS, IV 740.
BLACK-CAR, IV 740, XVI 756.
BLACK-COCK, IV. 740; IX 762; XVI 791 -shooting of, XX, 225

Black-death in the fourteenth century, XXI 944 and n 2 BLACK-GUARD, IV 740

BLACK-LEAD, IV 740 See Plumbago BLACK-MONKS, IV 740.

Black-quarter, disease in animals, XXI 557 BLACK-TIN, IV. 746-wadd, 1b --whytlof,

ıh BLACKALL (Offspring), prelate, IV 746. BLACKBURN, in Lancashire, IV 746. Blackett's locomotive engine, I 883. Blackfaced breed of sheep, IL 347. BLACKFRIARS, IV 740

Bridge, London, III. 409; V. 357; XIII 676—centre employed for, VI 379, 381—laying the foundations, XX

722. Blackgang Chine, Isle of Wight, XXI 861, 862.

BLACKING, IV. 747. BLACKLOCK (Thomas), IV. 747, 774. BLACKMORE (Sir Richard), IV. 747. Blackness, treaty of, XIX. 762. BLACKSTONE (Sir William), IV. 747—on

the jurisdiction of the Court of Queen's Bench, 644-on barretry, 472-on blasphemy, 754—on corporations, VII 413, 414-on barristers and seijeants, 465; IV. 473-on mns of court, XIL 384 -on the office of chancellor, VI. 411 on Magna Charta, 427-on the government and laws of England, VIII. 757 et seq .- on the use of the Norman language by lawyers, 794-on entails, 816—on the militia, XV 7—on feudal law, IX 525—on the game laws, on nobility, XVL 280—on fir X. 395ordeal, 701-on prescription, XVIII.

BLACKWALL (Anthony), IV. 748.

(M1), his observations on spiders,

III. 376-77. Blackwater, river in Cork, VII. 371; XII. 505; XXI. 408, 769.

— in Galway, X. 389.

Blackwell (T. E.), his experiments on weirs,
XII 76, 121, 125, 126.

(ALEXANDER), IV. 749.

(Kenyon), on the iron trade of Britain, XII 574 - (THOMAS), IV. 748.

# BLA-BLA

Blackwood (Captain), his survey of the coasts of New Guinea, IV 263.

Blackwood's Magazine, establishment of, XXI. 877—Professor Wilson's connection with, ib., 878-James Wilson's contributions to, 876; Dr George Wilson's, 874; Dr Moir's, XV 309, 310; Lockhart's, XIII. 545-Tytler's, XXI. 413, 414-Hogg's contributions to, and connection with, XL 558

BLADDER, IV. 749—anatomy of the urinary bladder in man, III. 68-in the mammalia, 113—in reptiles, fishes, and birds sometimes wanting, 1b .- diseases of, in the domestic animals, XXI 570-stone in the, ib See Calculus, Lithotomy. - (swimming or air), in fishes, XII.

Bladder-nut order of plants, V. 189.

- tree XVII. 762. Bladderwort order of plants, V 203. BLADE, IV 749

BLADEN (Martin), IV 749 Bladenoch, distillery at, XXI. 864.

BLADUM, IV. 749 Blaeberry, V 198.

Blaes, valves of the lacteals discovered by, II 762

BLAEU (William), printer, IV 749. Blagden (Dr), on amora borealis, IV 246 on fire-balls in the air, IX. 587.

BLAGRAVE (John), mathematician, IV.

Blankie's garnet doublet, XIV. 774. Blann, disease, XXI. 564.

Blaine (Mr), on veterinary science, XXL 579

BLAINVILLE (Henri-Marie Ducrotay de), French naturalist, IV. 749—his classifi-cation of animals, III 190—defects of his nomenclature, 188—on the class infusoria, 195-on the mollusca, XV 819 et seq —on the annelides, XL 304, 306, 307—on the dentition of the mole, XVI. 450—on the homologies of the teeth, 482—on zoophytes, XXI 983, 985, 988 et seg

(M), his musical scale or mode, XV 708

BLAIR (Dr Hugh), IV 749-on Addison's supposed misstatement of Locke's doctine concerning secondary qualities, I. 272—on beauty, IV. 540—on Ossian's poems, XVII 5, 6 —— (JAMES), IV 750.

(John), Scottish author, IV 751. (John), Scottish chronologer, IV

(ROBERT), author of The Grave, 751—his poetry, XVIII, 124.

(Dr Robert), his experiments with view to improve achromatic telescopes, I 751, 893, n. 2; II. 93; XVI. 535—his aplanatic telescopes, II. 94; XIV. 781; XVI. 585-his method of cornecting spherical aberration, 573on the spectrum, 584—his fluid object-glasses, XXI, 12L

BLAIR-ATHOLE, in Perthshire, IV. 751larch trees of, XVI. 101; XXI 275 Blair-Drummond moss, reclaiming of, II.

BLAISE, a military order, IV. 751. BLAKE (Robert), English Admiral, IV. 751: XI 576.

(Mr), on exchange, IX. 484, 44L (WILLIAM), engraver, IV. 753

Blanc (Louis), his system of communism, VII. 212-his work on the organisation of labour, ib. et seq.—his epitome of St Simonianism, 211—accused of insur ection, X. 238.

— (Mont), IV. 753; II. 624; XIX. 675—ascents of, II. 627—Mr Auldjo's account of his ascent, 628—Saussure's observations on its summit, IV. 467glaciers of, X. 633, 634—Coleridge's Hymn to, VII. 112.

- (Le), on French money, XV. 434,

BLANCH-HOLDING, in law, IV. 758. BLANCHARD (Jacques), painter, IV. 758.

aeronaut, II. 177—his journey

#### BLA-BLI

across the British Channel, 178-the first constructer of parachutes, 179. Blanchard (E), his entomological works, IX. 22.

- (Laman), his Life of L. E L, XIII 182.

BLANCHE-FERME, IV. 753

BLANCHING, in coinage, IV 753.

of vegetables, V. 106; XIII. 460of celery, XI. 744.

BLANCO, African cape, IV. 753; XV. 594, XXI, 364

Blancourt on ductile glass, X. 658. BLANDFORD-FORUM, in Doisetshire, IV.

BLANE (Sir Gilbert), physician, IV. 753on the diminution of sickness in the navy, XVI 106.

Blanes, Spanish city, IV. 753.
Blank, IV 753—coin, ib —verse, ib BLANKENBURG, IV. 753.

BLANKET, IV. 753—tossing in a, 1b. Blankof (Jan Teunisz), IV 753 BLAPS, genus of insects, IV. 754; IX.

Blapsides, tribe of insects, IX. 130. BLARNEY, in Ireland, IV. 754. BLASPHEMY, IV. 754

- against the Holy Ghost, IV. 754. Blast, XII. 546-hot blast, 547, 548. Blast-furnaces, X. 355, 359; XII. 545, 546.

Blastema, XVII 65L

BLASTING, IV. 754-screw, 757. Blastoidea, fossil echinoderms, XVII 99

BLATTA, genus of insects, IV. 757, IX -want of symmetry in some of the species, XII. 225, n.

BLAYE, in France, IV. 757, X. 632. BLAZONRY, IV 757.

Bleachers, diseases of, XIV. 443.

BLEACHING, IV 757-Berthollet's process with oxymuriatic acid, L 589duction of that process into Britain by Watt, XXI. 776—pre-eminence of Ul-ster in, XIV 285—of rags in papermaking, XVII. 254, 255—bleaching-powder, VI. 468; IV. 761. Bleak, fish, angling for, III 161—mock

pearls made from the scales of, VI. 407; IX. 334

BLED (or BELED) EL-JEREEDE, country in Africa, IV. 771, 722.

Blee (Robert), his safety-bucket, XIII. 448.

Bleeding. See Blood-letting BLEEDING OF A CORPSE, IV. 772. Bleek (Dr), on African languages, XIII. 227, 228.

Bleeker (Dr), on the botany of Java, XII.

BLEIBERG, town in Illyria, IV. 772. Bleinierite, mmeral, XV. 106. Bleking, VI 241.

BLEMYES, an Ethiopian tribe, IV 772. BLENDE, a mineral, IV. 772, XV. 121-

mining of, in Belgium, IV. 625. Blendes, minerals, XV. 121. BLENHEIM, village in Bavaria, IV. 772.; battle of, V. 448; IV. 515; IX 368.

House, IV. 772, XXI 904
Blenkarn (John), his treatise on timbertrees, XXI, 268—on oak timber, 271. Blenniidæ, or Blennioids, family of fishes, XII. 308-9; of fossil fishes, 346.

Blennius, genus of fishes, XII 309. Blennophis, genus of fishes, XII 309. BLENNORRHŒA, IV. 772. BLENNY, fish, IV. 772; XII. 308—vivipar-

BLEPHARIS, genus of fishes, IV. 772; XII. 297-of insects, IV. 772

Blepsias, genus of fishes, XII 283. Blessings, temporal, erroneously regarded as a proof of divine favour, I. 479. BLETONISM, IV. 772.

Bleuland on the structure of the esophagus, II. 836—on the mucous membrane, 836, 837, 838—on the lymphatics, 804 -on the villi of the ileum, III. 61. Blicher (S. Steensen), Danish author,

Bligh (Captain), long abstinence of his

#### BLI-BLO

crew from food, III. 180-governor of New South Wales, IV 272-his voyages for conveying the bread-fruit tree to the West Indies, V 301.

Bligh, in Australia, IV. 282 BLIGHT, disease of plants, IV. 772-Ameri-

can, XI. 716.

Burno, IV, 772-number of, in Britain and Ireland, VIII 749-basket-making by the, IV. 488-Bernoulli on teaching mathematics to, 672—asylums for the, in Dublin, VIII 224—numerous in Egypt, 422 — writing-case for the, XVIII. 504—printing for the, 553 proportion of, in Europe and America, ib -in Scotland, XIX, 800 See Blacklock, Blindness

BLIND-COAL, or Anthracite, IV 782 See Anthracite

– pit, VII 125 Blind-worms, XIX. 40.

BLINDING, an ancient mode of punishment, IV 782, II 5.

BLINDNESS (periodical), IV 782 - colour, VII 153, 637. - snow, IV. 826. See Blind.

Blistering plasters for the domestic animals, XXL 556, n 6.

Blisworth cast-iron bridge, XII 588 Bloaters, Yarmouth herring, XXI. 953 BLOCH (Mark Eliezer), 1chthyologist, IV 782

Blochurn boiler-plates, XX. 175. Blochus, genus of fossil fishes, XII. 338. BLOCK, IV 782; XIV 401

books, IV. 706, 708, XVIII 528, BLOCK-MACHINERY, IV 783, I 879, V 695, VIII. 83.

BLOCKADE, in war, IV 786-influence of, on neutral states, XVL 158

Blocking-course, in architecture, III 508 V 739.

Blocks, erratic, evidences of a deluge, VII. 723—on the Jura, XIII. 21. See Boulders

BLOCKZYL, IV 788. BLOEMART (Abraham), painter, IV. 788.

BLOIS, in France, IV 788; XIII. 635. BLOND (J. Christopher le), painter, IV 788—his method of printing in colours,

- kınd of lace, XIII. 142. Blondeau's marine barometer, IV 458. BLONDEL, troubadour, IV. 788

(DAVID), historian, IV. 788disproof of the story of Pope Joan, XII 786

(FRANÇOIS), architect, IV. 788; XI. 107

BLONDUS (Flavius), IV 788.

Blood, IV 788, II 778—globules of the, 779, XIV 762—its phenomena out of the body, 1b - iron in, VI 489-chemical constitution of, II. 781-in what arterial differs from venous, 782-as manure, 407-its character in different classes of animals, III. 171-chemical composition and properties of, VI 521; XVII. 664-its use in clarifying, VI. 755-effect of unoxygenated, on the brain, VIII 181-used as food IX. 758 -specific gravity of, XII. 89-bloodcells, XVII. 650—tubes, 653—formation of, from alimentary substances, 660-blood-glands, 660-function of, 664extravasation of, 690-changes it undergoes in the lungs, 663-passage of fluid from, to be transformed into the tissues, 663—its use in refining sugar, XX. 794—of reptiles, XIX. 13 See next article, Blood-letting, Blood-yessels, &c.

(carculation of the), XVII. 661; II. 772, 773; III 170—hinted at by Mondino in the 14th century, II. 756 partially announced by Servetus, 760; XX. 61, by Columbus, II. 761; by Cæsalpinus, 761; and fully demonstrated by Harvey, 761-organs of, in man, III. 3, 63; and in brutes, 112—in the arachnides, 367, 369—in the crustaces, VII. 539—insects, IX. 48—annelides, XI. 290, 291-fishes, XII. 244-

# BLO-BLU

crustacea and mollusca, XV. 356, 357, 331, 320—serpents, XIX. 48; other reptles, 13—zoophytes, XXI 973—Leuwenhoeck's observations on, XIII. 349 -course of the blood through the heart,

BLOOD, avenger of, IV. 789.

horse, XI 633 hound, IV 789; XI 764

religious uses of, IV, 788 (the), disease in animals, XXI. 568. (THOMAS), IV. 789

whyte, or wyte, IV 789.

Blood-letting, in surgery, XX. 830—more rarely resorted to than formerly, ib bleeding of the domestic animals, XXI. 555. n 6

Blood-root, order of plants, V 212. Blood-spavin, XXI 559

a shot of, in sheep and cattle, XXI 574.

BLOODSTONE, mineral, IV. 789: XV 69. Blood-vessels, Aristotle and other ancient writers on, II. 750 et seq -structure of arteries, 789; and veins, 792-vessels of the ear, III 47, hps, 48, tongue, 49; larynx, 51; brain, 56; stomach, 60 colon and liver, 62; lungs, 66, kidneys, 67; uterus, 71, and placenta, 72-um bilical, ib.-comparative anatomy of, 112—in the crustacea, VII. 539—in fishes, XII. 224—their diseases in the domestic animals, XXI. 574 See Aneurism, Entomology, Ichthyology, Ornithology, &c.

Bloom, in leather, XIII 307, 308. BLOOMFIELD (Robert), IV. 789

— (Dr S T), his edition of the New Testament, XIX 837. Blooms and bloomeries, in iron manufac-

ture, XII 558, 559, 538 Bloreheath, battle of, VIII 690 Blosse (M. de), his work on reformatories,

XXI 298. Blossom, protection of, in fruit-trees, XI.

707 - and blossoming of plants. See Flower, Flowering BLOUNT (Charles), IV 790; XIII 358-

his translation of the life of Apollonius of Tyana, XVII 548.

- (Sir Charles), VIII 713. (Edward), printer, XVIII 538. (SIR HENRY), IV. 790

(Martha), friend of Pope, XVIII. 334, 335.

(THOMAS), IV 790 (SIE THOMAS POPE), IV. 790. BLOW (Dr John), IV 790

XX. 269.

Blow-holes of the whale, XIV 232, 238. BLOW-PIPE, IV 790-use of, in mineralogy, XV 63-Berzehus' Essay on the use of the, IV. 684—anatomical, 794—how to keep up a continued blast with the, XVIII 76—known to the Sidomans,

BLOWING, IV. 794-of flowers, 1b, see Flower and Flowering—of tin, 795.
—of glass, IV 795, X. 663

BLOWING-MACHINES, IV 795; XVIII. 83water-machine, XII. 183. See Iron-manufacture, Smelting

Blowing-off, in marine steam-engines, XX.

Blown, disease of cattle, XXI 566 Bloxam (Mr), on escapements, VII. 10, 12
—his escapement, 13—his dipleidoscope, VIII. 37.

BLUBBER, IV. 798; XIV. 238; XVI. 493its use as manure, II 301, 407

Brücher (Lebrecht von), Prussian field-marshal, IV 798; V 619; X 143, 144 et seg.; XVIII. 656, 657-his combinations at the Katsbach and Laon, XXI.

BLUE, colour, IV. 798-in chromatics, VI. 644, 646 et seg.—varieties of, XV. 59—for printing, XVIII. 556—dyding of, VIII 301, 818—cyanometer, VII. 606.

(JOHN), variety of fluorspar, IV. 798; XV. 98

VITRIOL, IV. 798.

- Mountains, in Jamaica, XII. 679

# BLU—BOC

680; height of, XVII. 644—in Oregon, XVI. 705; XXI 420—in Australia, IV.

Blue Nile. See Bahr-el-Azrek. - and green faction, XIII 28.

river See Yang-tse-Klang. Blue-bird, XVI 756 Blue-gum, timber tree, XXI 278. Blue-throat, bud, XVI 755

BLUEING of metals, IV 798 BLUFF-HEADED, IV 799.

- form of elevated land, XII, 361, 362.

Bluhme (Dr), his views on the Justinian code, VI 745 Blumenbach (Johann Friedrich), M.D.,

IV 799-on albinos, II 447-his classification of animals, III 183-his classification of the human races, IX 343on zoophytes, XXI. 990

Blundell (Lieut), killed in a duel, VIII 232.

BLUNDERBUSS, IV. 799. BLUSHING, IV. 799.

Blythe (Walter), his work on husbandry, II 257, VIII. 723—on draining land, 130, 132

Bo, islands, IV 799

Bo, Islands, IV 199 BoA, genus of serpents, IV 799; XIX, 59, 61—teeth of, XVI. 431—peculiar to South America, XVII. 634—urine, 667—hybernation of B. murina, XII. 62.

BOADICEA, IV 799; V 378 BOAR, term in the manege, IV 799.

male swine, IV. 799 — wild, ib; XIV. 197, its teeth, XVI. 467; their chemical composition, 418 — in India, XI. 455 — Ethiopian boar, ib, IVI. 105 — wild a state of the control of th III. 105—masked boar, teeth of, XVI

Board of Trade, code of naval signals by, XX 25 - their supervision of steam-

vessels, 651.

Boat, IV. 800—of skin, 846—of wickerwork, 487—boat-signals, XVI 109—of papyrus, XVII 246-guard-boat, XI -rowing, racing, and pleasure-boats. XX 139.

BOAT-BILL, bird, IV. 800, XVI. 798. BOATSWAIN, IV. 800, XVI. 104 — boatswain's mate, IV 800 Boa Vista. See Bonavista.

Bob of a pendulum, XVII 383; VII. 5. Bobac, in zoology, XIV 189.

Bobbin, IV. 800, XIII. 142, 148, 144, XX. 282, 283, 511, XXI 785.

Bobbinet, manufacture of, VII. 451—machine, XIII 143, 144; XVI. 388— -smuggled into France, X. 253

Bobbing for ecls, IV 800
Boblaye (M.), on the geology of Greece, XI. 11.

BOBLINGEN, town in Wirtemberg, IV. 800. BOBSTAYS, IV. 800. BOCA-CHICA, IV. 800.

Bocage, a district in Vendée, in France. XXI. 534.

BOCAYENT, Spanish town, IV 800
BOCCACIO (Giovanni), IV. 800—one of
those who introduced a taste for literature into Italy, I 15-sums that have been paid for first editions of his works, IV. 710, n. 2; XVIII 532—his account of Dante, VII 647—his commentary on the Divina Commedia, 648 -Petrarca's intercourse with, XVII 497, 498, 499.

Boccale, liquid measure, IV. 803. BOCCALINI (Trajan), IV. 803. BOCCARELLA, IV 803. Bocchus, XIII 16.

Bocchors, Egyptian king, VIII 463. Boccone (Paolo), Sicilian naturalist, IV. 808.

Bochart (Samuel), IV. 803-on Tarshish, XXI. 27—on Syria, XX. 901. Bocher (Joan), VII 483. BOCHIUS, or Boch (John), IV. 804. BOCHNIA, in Galicia, IV. 804. Bochum, in Westphalia, IV. 804. Bockhold (John), anabaptist, II. 742. Booking, in Essex, IV. 804. BOCK-LAND, IV. 804.

# BOC-BOH

Bocydium, genus of insects, IX 170 Bodaert's Elenchus Animalium, III. 183. Boddington (M1), his account of the singular effects of lightning, VIII. 601 - oak, XXI 270

Bode (Johann Elert), IV. 804 mical annals edited by, III. 815-his catalogue of stars, IV. 80.

Bodenite, mineral, XV 90.

Bodensee See Constance, Lake of Boderia, or Bodotria, ancient name of the Firth of Forth, IV. 804.

Bodin (Jean), IV. 804; I 27-specimen of his views as a philosophical politician, ib-his Treatise de la Republique, ib., n 4, 28, n 1—absurdity of some of his notions, 28—his credulity on the subject of witchcraft, ib -his merits, ib, n. 5-his opinion of Machiavel. 233.

BODKIN, IV. 804 BODLE, IV 804

Bodleian library at Oxford, XIII 395; XVII 35; IV. 804—F. Junius's MSS. bequeathed to, XIII 20

BODLEY (Sir Thomas), IV 804, XIII

BODMER (R), his improvement on the safety-valves of steam-boilers, XX.

BODMIN, a Cornish town, IV. 805. Bodoni (Giambatista), IV 805. Boduni or Dobuni, VIII. 73

Body, definition of, X. 506—elementary bodies, VI 437—Plato's notion of, XVII. 806—primary and secondary qualities of, XIV 570, 571.

human, electricity of, VIII 571— development of, XIV. 425—its chemical changes, 617-its chemical composition, IX 755, n, 768—spontaneous combus-tion of, XIV, 427

BOECE, or Boethius (Hector), IV. 803 See Boyce

Boeckh, on the public economy of the Athenian State, IV 217—on a Greek inscription, 218, n—on the moneylenders of Athens, XII 427

BOEDROMIA, Athenian festival, IV 805 BOEHM, or Behmen (Jacob), IV. 805, XV. 757

Boehmer on canon law, VI. 190. Bothlingk on the Turanian languages,

XVII 535. BEOTIA, IV 805; XI 12, 18; XXI. 177
—monarchy of, XV 412—comage of,

XVI 371. Boeo, cape, XX. 246.

BOERHAAVE (Hermann), IV. 806; XIV 461-on the distribution of heat, I 758 -on the ments of the Hon Robert Boyle, V. 259-his doctrines as taught in the schools, VII. 574—on the nerves, II 814—on the poison of the viper, XIX 45-his admiration of Sydenham, XX. 893.

Boers, in Natal, XV 803, 804-at Cape of Good Hope, X. 712.

BOETHIUS, IV 807; I 323; XIV. 455.

XII. 640, XVII. 520-his Consolations of Philosophy translated by Alfred the Great, II 481.

Bog of Gight, town in Scotland, IV. 808. Bog-iron ore, XV. 108.

BOGALCUND, in Hindustan, IV. 808. Bogarmitæ, heretics, IV. 808.

Bogbutter, XV. 124 Boghead coal, X. 414, 434. Bognor, town in Sussex, IV. 808; XX. 839, 840

Bogoda, genus of fishes, XII. 275. BOGODUCHOW, IV. 808. BOGOMILI, heretics, IV. 808. BOGOTA, (Santa Fé de), IV. 808. Bogs, reclamation of, IL 361.

Irish, XII 507; XIII 81, 91, 92— in Kerry, 74—of Allen, 81, 91; XXI. 286—in Leitrim, XIII 828—Londonderry, 684—Kilkenny, 84—Roscommon, XIX. 421—Wicklow, XXI. 858. Bog-spavin, XXI, 559.

BOHADDIN, or Boh-a-Eddyn, TV. 811. Bohadschia, genus of zoophytes, XXI. 986.

#### BOH-BOL

BOHEA, black tea, IV. 812-tea-hills, in China, XXL 84.

Boheman (C. H.), his entomological works,

BOHEMIA, IV 812, 309; X. 582-geology, 583 - Cambrian and Cambro-Silurian rocks of, XV. 196, 197-upper Silurian rocks of, 198—monarchy of, 412—heights of mountains in, XVII. 643—conquered by the Poles, XVIII 138— -wines of, XXI. 886

BOHEMIAN, or Moravian biethren, IV. 812 Bohemian versions of the Bible, IV. 702—language, XIII. 214—glass, XVIII. 669 Bohemond, VIL 317.

Boheyret-Maryoot (Lake), VIII 429 Bohm (Dr), on the sun's rotation, IV. 87. Bohn, his works on medical jurisprudence, XIV 423

Bohnenberg's electroscope, XXI 620. Bohol, or Bool, Island, IV. 813 Bolardo (Count Matteo Maria), IV. 813poetry of, XVIII 110

Boxx, people of Ancient Gaul, IV. 814gave name to Bavaria, 515

Boileau (Major), on the Indus, XII 378 BOILEAU-DESPREAUX (Nicolas), IV. 814on the dramatic unities, VIII 150, 152 -poetry of, XVIII. 116

Boilers, for hot-houses, XI. 722 - multitubular, for locomotives, I. 885-prevention of smoke in, XX. 354, 355-steamboilers, historical notice of, 586-parts and appendages of, 589-pressure of steam in, 601—horse-power of, 602 boilers at Saltaire Mills, 604-classification of steam-boilers, 615 - different kinds of, ib, 616, 617—efficiency of steam-boilers, 632, strength, 634, ruptures and explosions, ib, 651-deposits in, 635 - economy in heating, 648scaling of, 649—marine, 651—tubular, ib —vertical tube-boiler, ib —sheet-flue, ib

Boiling, IV 814-phenomena of, XX. 554-boiling-point, IV. 814; XX. 555, 649, XXI. 222, its variation at different heights, IV. 467—bending wood by, XII 811-loss sustained by articles of food in boiling, IX. 766

- Springs, IV. 814, X 598; XIL 201, 202

Boisduval (J. A.), his entomological works, TX. 16

Bors-LE-Duc, Dutch city, IV 814. - (Francis le), physician, XIV. 461 Bois-Reymond (M du), on the electricity of the nerves and muscles, XVII. 672 on voltaic electricity, XXI. 663.

Boissard (Jean Jacques), IV. 814. Boitard (M T), his Manual of Entomology, IX 22.

Bowin (Madame), on the muscular fibres in the uterus, III. 71.

Bojador, African Cape, IV. 815. Bojanus, his Memoir on the Merycothe-

rium, XVL 467. Bojé (C Johannes), Danish author, XIX.

Bokenham (Mr), on vacations to the offi-

cers of the post-office, XVIII. 416. Bokhara, IV 815, V. 757 Bokharians in Russia, XIX. 523,

Bor (Ferdinand), Dutch painter, IV. 815. BOLABOLA, or Borabora, one of the Society Islands, IV, 815.

BOLBEC, in France, IV. 815.

Bolca, Monte, fossil fishes of, XII. 351, 354, 355; XVIL 127, 128, 640-geological period of, 128.

BOLE, mineral, IV, 815; XV 83 Boleophthalmus, genus of fishes, XII. 366, Bolcosoma, genus of fishes, XII 277. Bolero, Spanish dance-tune, XXI. 288.

Boleslas, kings of Poland so named, XVIII. 138, 139, 140. BOLEYN (Anne), IV, 815. See Anne Bo-

levn.

Bolgars, in Russia, XIX, 522, Boll, town in Natolia, IV. 815. Bollngeroke (Henry St John), viscount, IV. 815; V, 454; XX. 872, 873—his character of Marlborough, VI. 714-his

# BOL—BON

friendship with Pope, XVIII 332-his attack upon Pope, XXI. 729—Warburton's View of his philosophy, 730.

Bolis, or Bolide, meteor, XIV Bolitophila, genus of insects, IX. 228.

Bolivar (Simon), IV, 817—Boliva named after, 821-his constitution for Bolivia, 834, and its consequences, 835 - his ambitious schemes, 1b - his proceed-ings in Peru, XVII, 468

BOLIVIA, IV 821, II 705—British consul in, VII. 337-plateau of, XVII. 593west coast rainless, 615—produce of the precious metals in, XVIII. 461, 462; XV. 248—height of mountains, XVIII. 644, 645—maps of, VI. Plate.

Boll, com measure, IV. 838-in different counties of Scotland, XXI. 809. BOLLANDUS (John), IV. 838.

BOLLARDS, IV 838

Bollman (Dr), his method of distilling charcoal, XL 154.

charcoal, M. 154.

BOLOSKA, IV. 838—legation, XVII 243—

Institute of, II. 66—medical school of, 755—library of, XIII 413—silk manufacture of, XVII. 243—university of, XXI. 444, 448

- (GIOVANNI DI), IV. 839-character of his sculpture, XIX. 863

BOLOGNESE SCHOOL of painting, IV. 839; III. 710, XVII. 72 BOLOGNIAN STONE, IV. 839; XIII. 456,

XV. 94

BOLSCHAIA REKA, river, IV. 839. BOLSCHERETSK, IV. 839

Bolsena, town and lake in Italy, IV. 839; XVII. 242.

Borsover, in Derbyshire, IV. 839-its limestone as a building stone, XX. 712 Bolswert (Boetius-Adam), engraver, IV.

839; VIII 809. ---- (SCHELTIUS), IV. 839. BOLT-ROPE, IV 839 Boltenia, genus of mollusks, XV. 334.

BOLTER, IV. 839. BOLTING-MILL, IV 839 Bolton (Edmund), IV 839.
——iron-works, XII. 153, 154

Boltonite, mineral, XV 82

BOLTON-LE-MOORS, town in Lancashile, IV. 839—free library of, XIII, 406 cellar dwellings in, XVIII. 196 Bolzano, V 241

Bomangoi, III 166

Bomarsund, fortress, destruction of, XIX.

Bomatı, his work on insects, IX. 22 BOMB, IV 840, XI. 139, 141. See Shell. KETCH, V. 4. See Bomb-vessel - VESSEL, or ketch, IV. 840, X. 385.

BOMBARDIER, IV. 840. BOMBARDO, musical instrument, IV. 840.

BOMBASINE, IV. 840. BOMBAST, IV. 840

BOMBAX, genus of plants, IV. 840; V.

BOMBAX, V. 1; XI 463—presidency of, 529—Elephanta Isle near, VIII 628— meteorological observations at, XIV.

Bombelli (Raphael), his discoveries in methematics, I 588—on a MS of Diophantus, ib, n.-on algebra, II 485 Bomberg (Daniel), his Hebrew Bible, IV.

Bombinator, genus of reptiles, XIX. 81. BOMBUS, V. 4. genus of humble bees, V. 4, IX.

201. Bombycilla, genus of birds, XVI, 750. Bombycites, section of insects, IX, 212. Bombyharii, family of insects, IX. 233. Bombylus, genus of insects, IX. 233. BOMBYX, genus of moths, V. 4; IX. 213. Bomlcar, VI 284. BOMONICE, V 4.

Bon, African Cape, XXL 364

notabilia, ib -vacantia, ib.

Bona (Giovanni), cardinal, V. 4.

town in Algiena, V. 4.—massacre at, II, 572 DEA, Roman divinity, V. 4. FIDES, in law, V 4-mobilia, ib.

# BON-BON

BONALD (Louis Gabriel Ambroise), viscomte de, V 4-his estimate of the ments of Condillac, I 177.

BONAPARTE, or Buonaparte, V. 5. See Napoleon

(Carlo), prince of Musignano-his work on ornithology, XVI 731. — (Jerome), X 154.

(Joseph), X. 107, 168—king of Naples, 141, XX. 261, 264—king of Spain, X. 150, XX. 472, XXI. 823 - (Louis), king of Holland, XI. 579.

(Lucien), X 115, 141 Bonar bridge, tidal phenomena at, XVI. 58 Bonardi (Abbé), on anonymous books, IV

BONARELLI, della Rovere (Count Guid' Ubaldo), V. 5.

BONASONE (Giulio), engraver, V. 5. BONASSUS, V 5 See Bison. BONAVENTURE (St), V. 5.

Bonavista, island, V. 5; XXI. 545.

Bond (John), V. 5

(Mr), on magnetism, XIV 3-his discovery regarding the enlarged meridian, IX. 741-on navigation, XVL 6.

- (G P), on the perturbations of the small planets, IV 91.

\_\_\_\_ in building, V 732, 738; VII. 327, n.—bond timbers, V 734, 739, 747. BONDAGE, V. 5—by the forelock, 1b Bondager, IV 680. BONDMAN, V 5.

Bondou, African kingdom, V. 6. Bondsdorff (G), his works on insects, IX.7. Bone (Henry), enamel painter, V. 6. black, XII. 665

caves, XVII. 639; XV. 215.

- oil. II. 413. BONE-DUST, V. 6; IL 264, 299-as applied to turnips, 317; VI 524.

Bone-spavin, XXI 557, 558. Bonelli (F A.), his works on insects, IX. 11, 15

(Prof), on birds, XVI 731. Bonelli's electro-magnetic loom, XXI. 643, 789.

Bones, extraction of ammonia from, II. 722—phosphorus from, VI 478—composition of, IX 758, XVII 156—Duhamel's experiments on their growth, VIII 283—specific gravity of, XII. 89—their hollow form an instance of divine wisdom, XX. 766. See Ossification.

V 6 (HUMAN), IL 824-knowledge of Celsus and Galen as to their anatomy, 752, 753 — their forms, structure, and development, 824—chemical analysis of, 827; XVII. 156-their vessels, II. 827—their junctions, 830—of the skeleton, III. 4—of the ear, 46— phosphate of lime in, XVII. 654, 655.

- OF THE LOWER ANIMALS, the mammalıa, III 74, 75—of birds, 83; XVI 735—of reptiles, III 86—of fishes, 89; XII 207—fossil (see Palæontology) of the ear, IV. 98, 99-proportion of hard and soft matter in, XVII. 156chemical composition, ib.-diseases of, XXL 557.

- as manure, II. 411, 264, 299; VI. 524—fermented, II. 300—as a top dress-ing for pastures, ib—dissolved, 411— analysis of, ib. See Bone-dust.

Bo'ness, in Linhthgowshire, V. 56-coal wrought there in the twelfth century VII. 116

Bonet (Theophilus), V. 6. Boneadio (Jacopo), V. 6. Bonemi (Anthony), V. 6.

BONFRERE (James), V. 6. Bongars (Jacques), V. 6.

Boni, or Bony, a state in the island of Celebes, V 7; VI. 361.

 (Abbé), on editions of the classics, TV. 711.

BONIFACE (nine popes of that name), V. 7
—collection of decretals by Boniface VIII, VL 189.

(St), the apostle of Germany, V. 7. BONIFACIO, town and strait, Corsica, V. 7; VII. 417.

## BON-B00

Bonito, fish, XII. 294

Bonjol (Mons), on the electricity of the air, VIII 588—on electro-chemical decomposition, 597-his improvement in galvanic batteries, XXI 618.
Bonjour (M.), his bleaching establishment,

IV 759.

BONN, in Germany, V. 7—university of, XVIII. 673; XXI 492

- (Andrew), on the membranes, II. 765-on the connection between the mucous membrane and the skin, 838

Bonnerons (Jean), Latin poet, V 8.
Bonner (Edmund), bishop of London, V.

8; VIII 710, 71L BONNET (Charles), V. 8—his commentary on Leibnitz's theory of a sufficient reason, I 131, n. 2-was the first to assert that there is a scale of beings from the Deity downwards, 134 and n 3, 149—his zeal for the scheme of necessity, ib, n. 5-his speculations on human nature, 170—agreement of his opinions with those of Hartley, 171—on ants, III. 261, 262, 264-his works on insects, IX 4-on vegetable monstrosities, XV. 504

or Bonet (Theophilus), V. 6. - in fortification, IX. 803. BONNEVAL (Claude Alexandre, Compte de),

V. 9.

BONNYCASTLE (John), V. 10.

(Charles), on magnetism, XIV. 9, 41.

BONONCINI (Giovanni Maria), V. 10; XIII. 697.

BONONIA, V. 10 See Bologna and Boulogne.

- a town in Pannonia; also a town in Bulgaria, V 10.

Bonpland on the Gymnotus electricus, VIII. 575.

Bonsdorfite, mineral, XV. 88 Bontius on birds, XVI 726
Bonus system, in life assurance, XII. 412.
BONVINCINO (Alessandro), V. 10.

Bony. See Boni. Bonzes, V. 10—in Siam, XX. 233, 234. Boobies, birds, XVI 814. Booth Gayah, X. 442.

BOODROOM, town in Anatolia, V. 10.

Boodt (Bœtius de), XIII. 451. Book, V. 10-constituent parts of, IV. 705in manuscript before the origin of printing, 706-books of the ancients, 707different forms of letters in modern, ib -differences in editions, ib - early printed, 708-rare, 709-classical, ib anonymous and pseudonymous, 711—condemned and prohibited, 712—dictionaries and catalogues, 713-classification of, 715—mode of whitening and cleaning, 771—number of books published annually in Britain, V. 31; VII 356—only one in eight reaches a second edition, 356—libraries entitled to copies of every book published in their respective kingdoms, XIII. 374—clay books, XVIII. 431—Japanese books, XII. 695 -Mexican, II. 684-number printed in

Copyright, Libraries, Printing.

of Common Prayer, XIII. 517. BOOKBINDING, V. 12-gilding of book-

Russia, XIX. 532 See Bibliography,

covers, X. 627.

BOOK-KEEPING, V 15—system fellowed in Savings-banks, XIX. 667

BOOKSEILING, V. 30—limited profits of the business, VII. 356—book fairs of Leipsic, XIII. 325—book trade of Germany, X. 592; of United States, XXI. 423-number of booksellers in London; XIII. 660.

Bool or Bohol, Island, IV 813. Boolak, in Egypt, VIII. 498. Boole (Dr), on the laws of thought, XIII. 578.

578.

BOOM, V. 33; XL 222.

BOOMERANG, V. 38.

BOOMING, V. 33.

BOONDEE, town in Hindustan, V. 38. BOORHANFOOR, town in Hindustan, V. 33. Booriats of Siberia, XIX. 550. Booro, island, V. 33.

# BOO-BOR

Booroojird, Persian city, V. 33. Boor, V 33—order of the XIII. BOOT, V 38—order of the, XIII. 121. BOOTAN, country in Asia, V 33. Bootanese, people in Tibet, XXI 247 Bootes, constellation, V 35, IV 79 BOOTH (Barton), tragedian, V. 35, XXL

(Benjamin), on book-keeping, V.

BOOTHIA FELIX, V 35; XVIII 172. BOOTON, Island, V. 35. BOOTY, V 35

Bopal, in Hindustan, V 35. Bopp (E. Francis), on the Sanserit language, XVII 529

Bora, wind, XIV. 470

Borabora, IV 815 Boracic acid, V 35; VI 481; XV. 61, 64-analysing stones by means of, VII 668-specific gravity of, XII 89-in the Lagune of Tuscany, XVII. 602

Boracite, XV. 94-pyro-electricity of, VIII 559.

Borage, plant, XI. 745; V 201. Boraginaceæ, nat order of plants, V 201 Borak, fabulous animal, V. 36. Boras, Indian race, XL 92

Borassus, genus of palms, V. 36, XXI.

Borate of lime, XV. 94
Borax, V 36; VL 481; XV. 98—in the lakes of Thibet, XVII. 602-used as a

flux with the blowpipe, IV. 791
Borbonica library at Naples, XIII 415.

Borborus, genus of insects, IX. 258
Borda (John Charles), V 36, I 851—on
projectiles, XI 138—on hydraulics, XII. on the pendulum, I 851; XVII 383—his pneumatic experiments, XVIII. 67-his measuring rules, 703-on seamanship, XX. 11

manship, XX. II BORDE (Andrew), V 38 BORDEAUX, V 38; X 632—Roman edi-fices formerly at, III. 444, n,—popula-tion, X. 277—Academy of, XXI. 491 wines of, 883, 890; exports of, to Britain, 883.

- (Henri), Duke de, his birth, X. 183-visit to England, 220.

Bordeu, on the cellular membrane, II. 765, 786.

Bordier (Marcet), his reflectors, XIII 470. Bordier's method of making leather, XIII 308.

Bording (Anders), Danish lyrical poet, XIX. 692 Bords de l'Eau, conspiracy of, X. 179

Botdures, in heraldry, XI. 326.

Bore of rivers, XVI 65—at the mouth of the Brahmapootra, V. 266—of the Amazon, II. 675—Hooghly, XI. 619,

XVII. 581 BOREAS, V. 38.

Borel (Pierre), V. 38.

Borelli (Giovanni Alfonso), V. 38; XIV 461-the first who demonstrated the impossibility of flying, II. 167-treatise of Apollonius on conic sections dis-covered and translated by, III. 301; VII. 249-his diving-bladder, VIII. 58 on the diving-bell, 60.

Boreus, genus of insects, IX. 178. Borga, in Finland, V. 39

Borghese, noble Sienese family. V 39. Borgia (Alexander), V. 39. See Alexander VI, pope (CESAR), V. 39; XII. 651; IL.

467 - Machiavelli's intercourse with, XIII 777.

- (LUCREZIA), V 39; IL 467. Borgo (San Donino), town in Parma, V. 39.

(SAN SEPOLCEO), in Tuscany, V. BORGOGNONE (Jacopo Cortese), V 89

Borgoo, or Borgu, two kingdoms in the interior of Africa, V. 40, II 211. Borne, V. 40—of cannon, ib.—of cylinders, 43-of musket barrels, 44; XI. 97-of wooden pipes, V. 45-for coal, VII. 119.

- of rocks, V. 44; IV. 755. See Blasting.

# BOR-BOS

Boris, sovereign of Russia, XIX. 474. Borissov, town in Russia, V. 45 Borja, Spanish town, V. 45 Borkum, island, V. 45 BORLAGE (Dr Edmond), V 45.
BORLAGE (William), V. 45—his Natural History of Cornwall, XVI. 728. BORMIO, in Lombardy, V 46

Born (Ignatus, Baron Von), V 46
Borneo, V 47—diamonds found m, VIII.
1, 2—Chinese m, VI 585—orang-outang of, XIV 138-missions established in XV 271—language, XIII 207—ser-pents in, XVII 684; XIX. 53, 54, 60, 86-trade with Singapore, XX. 307.

BORNHOLM, island, V 50 Bornite, mineral, XV. 117 Bornou, kingdom of central Africa, V 50, II 229

Borodia, genus of fishes, XII 285 Borodino, Russian village, V 54-battle of, X 156.

BOROUGH, V. 54, VI 481; VII 670 BOROUGH, V. 54 — Royal, 1b.—justices, XVIII 192-police, 196.

BOROUGHS, representation of, V. 54, XVII 293, 294-extension of their boundaries, VIII 719. See Municipal Corporations BOROUGHBRIDGE, in Yorkshire, V. 54battle of, VIII. 681.

BOROUGH-ENGLISH, V 54
BOROVSK, town in Russia, V 54. Borrelists, sect, V 54 BORRICHIUS, Or Borch (Olaus), V 54.
BORROMEAN ISLANDS, V 54; XII 637,

XIII 644. BORROMEO (Carlo), cardinal, V. 55-colossal statue of, VII 151; III 673

——— (FREDERIGO), founder of the Ambrosian Library, V 56; XIII 413
BORROMINI (Francesco), V 56—character of his style of architecture, III 453 Borrowdale, black-lead mines in,

577; XVII 375-annual fall of rain in, XIV 657. BORROWSTOWNNESS, in Linhthgowshire, V.

56-bed of marine shells near, IX. 794 —coal-fields of, XIII 497.

Borseholder, V 56.

Borsonia, fossil mollusks, XVII 110

Borulawski, a Polish dwarf, VIII. 271 Bory de St Vincent on animalcules, III. 195 et seq.—tabular view of his classifi-cation of animalcules, 196—account of Bourbon, V 247-on lizards, XIX. 28 -on cameleons, 37

BORYSTHENES, river, V. 56 Bos, genus of mammalia, V 56, XIV. 213—teeth of, XVI. 466, 467—fossil species, XVII. 170—palæontological characters of, 172 - B. primigenius,

- ancient com, V 56. Bosa, Sardinian city, V 56
Bosc, his bee-hive, III 295—on the alligator, XIX 25—on the rattlesnake, 69—on zoophytes, XXI. 992. Boscage, V 56.

Boscan (Almogaver, Juan), poet, V. 56; X. 402—poetry of, XVIII 113.

Boscawen (Edward), admiral, V. 56, 463 Boscor, or Bosci, monks, V 57. Boscovion (Roger Joseph), V. 57—his extraordinary talents, I. 202—his theory of the constitution of the universe, 721, 936-reasoning by which he supported it, 721-sketch of his life and writings, 1b. n—obscured his theory by scholastic metaphysics, 722; it may be regarded as a happy extension of the law of attraction, ib -on achromatic glasses, II. 93-on aurora borealis, IV. 246-on the construction of combs, 578-on the orbits of comets, VII 168 -on crystallization, 546—lis measure-ment of a degree, IX. 550—on the spectrum, XVI. 584—his theory regarding the senses, XIV. 613-manner in

on that subject, 755.
Bosh, or Bautschi, in Houssa, XI. 776.
Bosjesmans, or Bushmen, V 58.

which he has represented the action of corpuscular forces, XX. 751; his work

# BOS-BOT

BOSNA-SERAI, Turkish city, V. 58
BOSNA, in Turkey, V 59; XXI 380.
BOSPHORUS, V 59, IV 740—supposed
burstang of the Thracian, 741—map of, VII. Plate.

- (Cimmenan), monarchy of, XV. 412 Bosanquet (Mr), on the bullion question, XIX. 153.

Bosquers, in gardening, V. 59.
Boss, in architecture, III 508
Bosscha (Hermann), V 59.
Bosschaert (Thomas Willbrord), V 59. BOSSINEY, in Cornwall, V. 59

Bosso, or Bossus (Matteo), V. 59 Bossu (René le), V 59

Bossuer (Jacques Bénigne), V. 59-contrast between him and Fénelon, I. 351 -his reply to Fénelon concerning man being influenced by a disinterested love of God, 352—in this controversy relied mainly on the principle that, as man must desire his own happiness, he desires everything as a means to it, ib. -his opposition to Madame Guyon's opinions, XI. 163—his attack on Fénelon, XV. 758; IX. 506

BOSSUT (CHARLES), V 61-his experiments on the resistance of water in narrow canals, I 725, to vessels, XX 158-on hydrodynamics, XII. 72, 114, 116 et seq.; XVIII 64, XIX. 187, 189
—his wheel, XII. 142

—in massacilisetts, v 6.1; Alv. 341—destruction of tea at, V. 477—free library at, XIII. 430, XXI 424—early newspapers of, XVI. 192—gazette, 193—lee-trade of, XII. 196—suicides in, XX. 800-military operations at, during the Revolutionary war, XXI. 749-evacuated by the British forces, 750-temperature at, 421.

Boswell (James), of Auchinleck, V 63 —his intercourse with Dr Johnson, XII 800—notice of Dr Adam Smith by, XX. 344, n. 2

Bosworth-Market, in Leicestershire, V. 64—battle of, VIII. 694. BOTAL (Lionardo), V. 64

Botanic garden, Edinburgh, VIII. 399—of Montpellier, XV. 521—Glasgow, X. 656, Botanical structures, XI. 754

BOTANY, V. 65-structural and physiological, 65 - taxological, or relating to classification, 174—geographical, 219—palæontological, 232 — Cæsalpinus on, VI. 56—distinction between plants and animals, II 748; III 168—Cavanilles on, VI 349—Drudical knowledge of, VIII 188 - its advancement in con-VIII 188— its advancement in connection with materia medica, XIV. 461
—distribution of plants, XVII. 624—of
the Alps, II 628—Canary Islands, VI.
164—Ceylon, 393—Egypt, VIII 430—
Madeira, XIII. 800—Himalayas, XI.
443—Lapland, XIII. 235—Madagascar,
791—Perthshire, XVII. 488—Scotland,
XIV. 708—Missayan G. 458—Scotland,
XIV. 708—Missayan G. 458—Scotland, XIX. 795—Museum of Economic, XXI. 322—of Cape Verde Islands, 544 See Plants, and the geographical articles generally.

BOTANY BAY, V. 239; IV. 271, 272. BOTANGO, V. 239 Botaurus, genus of birds, XVI. 799

Botero (Giovanni), early notice of tea by, XXI, 88.

BOTH (Jan and Andreas), Flomish painters, V 239,
BOTHNIA, V. 239

- Gulf of, V. 240; IV. 402, 404. Bothriocephus, genus of zoophytes, XXI.

Bothriolopis, genus of fossil fishes, XIL 836; XVII. 120.

Bothroconis, fossil sponges, XVII. 93. BOTHWELL, in Lanarkshire, V. 240.

Bothwell Bridge, battle of, V. 430.

(JAMES HEPBURN), Eall of, V. 240;

VIII. 891; XIX. 785.

### BOT-BOU

Botryllidæ, family of mollusks, XV. 332. Botryllus, genus of mollusks, XV. 330,

Botryogene, mineral, XV. 97. BOTRYOIDAL, V. 240

Botryolite, mineral, XV 94.

Botrytis infestans, fungus supposed to be the cause of the potato disease, V. 172,

Bots, V. 240; IX. 247—in cattle, XXI. 569.

Botta (M), his discoveries on the site of Nineveh, XVI. 273 Bottcher (J Frederick), his manufacture

of porcelain, XVIII. 435.

Botticelli (Alessandro), V. 240. Bottiger on Tacitus, XXL 4, 5.

BOTTLE, V. 240.

– glass, X. 674. – nose whale, dentation of, XVI. 443 Bottling of wines, XXI. 883

Воттом, V. 240 BOTTOMRY, V. 240

BOTTONY, in heraldry, V. 241; XI 329. BOTTRIGARI (Ercole), V 241

Botys, genus of insects, IX 218 BOTZEN, or Bolzano, in the Tyrol, V. 241.

Bouchardat (M.), on the polarization of fluids, XVI 681

BOUCHE OF COURT, V. 241.

Boucher de la Richarderie, his catalogue of voyages and travels, IV 714.

Boucherie (Dr), his method of preserving timber, XX. 167.

Bouches bu Rhone, department of France, V. 241. Bouchette (Colonel), his work on British

America, VI. 147. Boudet on the oil of the blood, II 781

Bouflers (Louis François, Duke de), V. 242, 447, 448, IX. 369

Bougainville (Louis Antoine de), V. 242 on the Pemplus of Hanno, X. 461his discoveries in Australasia, IV 263, 265 - his settlement in the Falkland Islands, V. 470-discovery of one of the Samoan group of islands, XVIII. 277—his visit to Tahiti, 280

BOUGEANT (Guillaume Hyacinthe), V 243 -his notion that brutes are animated by devils, 701, 702—anecdote in proof that they can communicate their ideas to each other, 704.

Bougian, V. 243. See Bugiah. Boucie, suigical instrument, V 243; XX.

BOUGUER (Pierre), V. 243-on the attraction of mountains, I. 834-1 educed the theory of hydrostatics, as applied to naval architecture, into a simple and elegant form, 724 his life and character, 724, n. 1-his rule regarding the barometrical measurement of mountains, 730-his treatise on the figure of the earth, 773, III 806-measurement of a degree by, in South America, ib; IX. 549; III. 806, VII. 230—on the moon's light, IV. 41—on the gradation of atmospheric density, 464—his quarrel with Condamine, VII 230—optirei with Concumne, vir 230—opti-cal phenomenon seen by, 411—his hellometer, XI 289, XIV. 747—on reflected light, XIII. 451—on optics, XVI 585—photometry, XVII 555—on seamanship, XX. 2, 3, 9, 17-on the strength of oak, 775

Bounours (Dominique), V 244 French New Testament, IV. 701

Bouillaud (Ismael), his catalogue of books, XIII. 378.

Boulac, or Boolak, VIII. 498. Boulainvilliers (Henri de), V. 244. BOULANGER (Jean), engraver, V. 244.

BOULANGER (Jean), engraver, V. 244.

BOULANGERITE, mineral, V. 246; XV. 119.

BOULAY (Cesar Egasse du), V. 245—on the University of Paris, XXI. 445, n. 1, 446, n 1, 447.

Boulaye (Marquis de la), VII. 282. Boulder, V. 245; VII. 723; XV. 215; IX. 827.

formation, in geology, V. 245; XV. 215, XVII. 587

#### BOU-BOU

Boulogne-sur-mer, V. 245 — Nelson's attack on, 583 — Bonaparte's encampment at, 597-population, X. 277 BOULTER (Hugh, D.D.), V. 245.

BOULTINE, V. 246
Boulton (Edmund), IV 839.

(MATTHEW), V 246 - his coming machine, VIL 91.

and Watt. XXI, 776—their steam. boiler, XX. 587-their rule for estimating horse-power, 602—their steamboat

machinery, 638, 639
Bounty, V. 246; VII. 189—act, on the exportation of corn, 377—effects of this, 378-effects of, on the exportation of raw produce, 387-act of 1784, and its effects, 384, 385-bounties have no tendency to reduce the real price of corn by causing a glut of the market, 387tend to increase fluctuations in the price of raw produce, 388-on French fishenes, X. 265.

Bouquetin, in zoology, XIV. 212 Bourasse (J J), his entomological

sketches, IX. 23 BOURBON, name of one branch of the Capet family, V. 246—Neapolitan dy-nasty of, XX. 264. See France.

(CHARLES), duke of, V. 246; X. 29,

(Duke of), his death in 1830, X.

(NICOLAS), senior, Latin poet, V. 247.

(NICOLAS), Junior, French poet, V. 247.

GISLE OF), V. 247; II. 229. BOURBON-LANCY, French town, V. 248. BOURBON-L'ARCHAMBAULT. French town. V. 248

Bourbon-Vendée, French town, V 248. BOURBONNAIS, IN France, V. 248; X. 277 BOURBONNE-LES-BAINS, IN France, V. 248. Bourchenu de Valbonais, IV. 779

BOURCHIER (John), Lord Berneis, V. 248 BOURDALOUE (Louis), V. 248

Bourdeaux. See Boideaux. Bourdeaux (Jean), French critic, V. 249. Bourdon (Sebastien), painter, V. 249, XVII. 76

Bourdon's metallic barometer, IV. 460. Bourg, town in France, V. 249. Bourgelat (Claude), V 250. Bourgeois type, XXI 401, 403 Bourgery's work on anatomy, II 770 Bourges, French town, V. 250—university

of, XXI. 448 Bourger (Jean), V. 250. Bourgoing (Jean François), V. 250 Bourgueticrinus, fossil echinoderms, XVII.

Bourguignons, V 250, 773.

Bourganon (Antonette), V. 250.
Bourke (Sir Richard), governor of New South Wales, IV 273. Bourlet (L'Abbé), his work on the Podu-

rella, IX. 22.

Bourmont (General), his expedition against Algiers, in 1830, IL 573, X. 197, 203.

Bourne, town in Lincolnshire, V. 250. —— (Wm), on gunnery, XI. 103—on navigation, XVI 3

(Sturges), his Poor-law Act, XVIII.

202. (Mr), on mechanical feeders for boilers, XX. 356.

BOURNONITE, mineral, V. 250; XV 120. BOURRIENNE (Fauvelet de), V. 250—his report of a conversation with Napoleon on the invasion of Britain, X. 136, n.

ournt (M), his attempts to ascend Mont Blanc, II. 627. Bournt

Bousmard (M. de), on fortification, IX. 816, 833,

Bousquet (M.), on vaccination, XXI 501. Boussa, town in Central Africa, V. 250-Park killed at, IL 210.

Boussingault (M.), on rural economy, II 374—on the advantages of irrigation, XII. 611-on the absorption of leaves,

BOUSTROPHEDON, V. 250, 10.

#### BOU-BOY

BOUTERWEK (Friedrich), V. 250-on poetry, XVIII. 115, 118.

Bours-Rimés, V. 251. Bouvard (M.), his tables of Uranus, I. 828 -dates of his birth and death, 829, n. - (Eugène), I 829.

Bovey coal, VII. 763.

Bovichthys, genus of fishes, XII. 273, 218. Bovidæ, fossil, XVII 169.

Bovino, Neapolitan town, V 251.

Bow, V. 251-said to have been invented by the Philistines, XVII. 515-crossbow, V 251—in shipbuilding, ib; XVI. 97—net, V. 251 See Aichery.

Bowden (A.), on dry-rot, VIII. 207, 208. Bowdich (Thos. Edward), V. 251—his mission to Ashantee, III. 725 ——— (NATHANIEL), V 251—his commen-

tary on the Mecanique Celeste, L 827 Bowels See Intestines.

BOWER, V. 251. - Anchor, V. 251; III 116. - (Walter), IX. 777.

Bowerbank (J. S), on the circulation of the blood in insects, IX, 22, 49-on the larvæ of Agrion, 49-on sponges, XXI.

Bow-fell, in Westmoreland, XXI. 842. BOWLES (Rev. Wm. Lisle), V 251—his

suggestion as to the original use of church spires, III 449-his controversy with Roscoe, XIX. 419.

BOWLINE, V. 252, XX. 125. BOWLING, V. 252.

- GREEN, V 252.

Bowman (Mr), on the corpora globosa of the kidney, IL 769—on muscular filament, 821.

(Mr), iron ship built by, XX. 195. Bowring (Mr), on Fiench commerce, X. 257, 258

(Sir John), his visit to Siam, XX. 234; notices of that country, 232, 233 -his translation of a Russian poem, XXI 971.

BOWSPRIT, V. 252. BOWYER, V. 252

- (WILLIAM), printer, V. 252.

Box, genus of fishes, XII 287.

V 252—dice-box, ib —box girders, Boxaodon, genus of fishes, XII. 287

Box-elder tree, XVII 762 Boxer (Capt), on gunnery, XL 128, 229 et seq.-his work on artillery, 145-his

fuze, 142; III. 702. Box-haul, in navigation, V. 252. Boxhorn (Mark Zuer), V. 252.

BOXING, V 252; XI. 170—boxing the compass, V 252—the tapping of a tree, ib Boxmool cast-iron bridge, XII. 588 Box tunnel, on the Great Western Rail-

Boxwood, V. 252-specific gravity of, XII. 89—plant, as an edging to walks, XI. 748—as timber, XXI. 278—used in wood engraving, 904

BOYACA, or Bojaca, in New Grenada, V. 253; X. 797—Bolivan's victory at, in 1819, IV. 818.

BOYAR, Russian title of nobility, V. 253; XIX. 524.

Boyau, in fortification, V. 253. Boy-візнор, V. 253.

way, XVIII. 761.

BOYCE (Hector), V. 253 — Bellenden's translation of his History of Scotland, IV. 633

(J.), his life-boat and safety-buoy, XIII. 445. BOYD (Mark Alexander), V 255

(William, Lord), XIX. 760. (ZACHARY), V 255 (ship), massacre of its crew by the

New Zealanders, IV 267.

Boxer, a kind of Flemish sloop, V. 256.

(Abel), V. 256. (ALEXIS), V 256. (General), President of Haytı, XI.

BOYLE (Charles), earl of Orrery, V 256. his controversy with Bentley, IV. 658.

### BOY-BRA

BOYLE (John), earl of Cork and Orrery, V. 256

(RICHARD), earl of Cork, V. 257 (RICHARD), earl of Burlington and Cork, V 257.

- (The Hon. ROBERT), V. 257-his contributions to metaphysical science, I. 139, n. 2—his improvements of the air-pump, 597, XVIII 33—on pneumatics, 58; IV. 453—on electricity, VIII. 523—on heat, XI. 260—on the colours of thin plates, XVI. 599-Boylean law in pneumatics, XVIII. 53, 55, 57; L 958; XX 563, 564—his improvements in thermometers, XXI 221.

(Roger), earl of Orrery, V. 259. Lectures, V. 260.

or Abbey Boyle, in Ireland, V.

BOXME, Irish river, V 260; XIV 375,
 XVI 87—battle of the, V. 442; VIII
 179, XII 490—Boyne bridge, 597.

BOYSE (John and Samuel), V. 260. Boze (P1of), his electrical discoveries and improvements, VIII. 526, 527. BOZRAH, V 261.

Bra, Sardinian town, V. 261. Braan, river, falls of, VIII. 260 Brabanciones, V. 261. Brabant, V. 261; XI 582, 587; IV 612, 613, 614.

Brabazon (Mr), on Irish fisheries, IX. 631, 633.

BRABEUTES, V. 261; IL 242. Braby's fire-escape, XIII. 438. Bracciano, lake, XVII. 242. Braccioli (Anthony), his Italian Bible, IV.

BRACCIOLINI (Francesco), poet, V. 261. — (Poggio), V. 261—his Ana, II. 737—MS. of Quintilian discovered by, XVIII 738.

BRACE and Braces, V. 262 - (Mr), on Norway, XVL 330, 331, 332.

Bracegirdle (Mrs), actress, XXI. 174. Bracelet, V 262.

Brache (Mr), his estimate of the extent of auriferous land in Victoria, XV. 232. Brachelytra, family of insects, IX. 102.

Brachinus, genus of insects, IX. 79 Brachiopoda, class of mollusca, V 262, XV. 336, 322—fossil, XVII. 103—extinct genera of, 115.

Brachuna, genus of zoophytes, XXI 982. Brachlesham, eccene beds, XV. 212, 213. Brachins, V. 262 See Brahmins. Brachon, genus of insects, IX. 188.

Brachycerus, genus of msects, IX. 138. BRACHYGNATHUS, genus of fossil fishes, V. 262 XII 355

BRACHYGRAPHY, V. 262. See Stenography. Brachyopa, genus of insects, IX. 240 Brachypters, family of birds, XVI 809. Brachypus, genus of insects, IX. 140. Brachysomophis, genus of fishes, XII. 232. Brachystoma, genus of insects, IX. 235. Brachyura, tribe of crustacea, VII. 540-fossil, XVII. 100.

BRACKET and Brackets, V. 262. BRACKLEY, in Northamptonshire, V. 262 Bracteates, coins, XVI 386. Bractlets, or Bracteoles, in botany. V.

Bracton (Henry), V. 262.
Bracts, in botany, V. 112.
Bracy-Clark, his work on Bots, IX. 11;
XXI 569—his account of these insects, IX. 247.

Bradano, river, XX. 238. Bradbury (Henry), his nature-printing process, XVIII. 555. - Rings, VIII. 112.

Braddock (General), XXI. 745. Bradford, in Yorkshire, V. 263; XXL 958, 959—woollen and worsted manufactures of, XIV. 287; XIII. 313, XXI.

918-wages at, 920. (GREAT), in Wiltshire, V. 268.

(JOHN), V. 268.

BRADING, in Isle of Wight, V. 268—XXI.

BRADLEY (Dr James), V. 268; III. 804-

#### BRA-BRA

his discovery of the aberration of light, L 685, IL 36; IIL 804; of the nutation of the terrestrial axis, 805-on refraction, IV 9-his micrometer, XIV. 758 -his catalogue of stars, IV. 80-on the proper motion of the stars, L 845-reduction of his observations by Bessel, 848, 849-on the action of the wind on vessels under sail, XX. 6.

BRADNINCH, in Devonshire, V. 264 Brads, kind of nails, V 264, 750. Bradshaw (Henry), V. 264.

— (John), V 264 — (William), V 264

Bradwardin (Thomas), archbishop of Canterbury, V 264; I 325, n. 5—his ethical doctrines, 325.

BRADY (ROBERT), V. 264 - (Nicholas, D D.), V 265 Bradypus, genus of mammalia, XIV. 190

-dental system of, XVI 441 BRAEMAR, in Aberdeenshire, V. 265; IL. 32-its excellent fir timber, XII. 817

Brag, game at cards, V 265 Braga, in Portugal, V. 265. Bragança, in Portugal, V 265.

Braganza, Duke of, XVIII. 386-dynasty

in Portugal, 392
Brahe (Tycho), V. 265; III. 798; VII
348, 349, n—his ments and discoveries as an astronomer, L 601 et seq-his belief in astrology, 604—his discovery of the inequality of the moon's latitude, IV 34-on the formation of a new star, I 842-astronomy of comets originated with, VII. 167-his planetary system, IV. 54-his catalogue of stars, 80-on the longitude, XIII. 686.

BRAHILOW, in Wallachia, V 266.

Brahm (N J), his entomological works, TX. 8.

-XL 468; V 266, XV 761 BRAHMA, supreme god of the Indians, V. 266; XL 467; XV. 761; XVII 230.

BRAHMAPOOTRA, river in India, V. 266, IV. 648, X. 401; XVII 606—its source, III. 762, XI 440, n 2.

Brahmegupta, algebraist, II 487.
Brahmkns, V 266; VI. 317, XI. 468-9,
471; XVII. 19—produced by Brahma,
XV. 761—Playfair on their astronomy, XVIII. 4-suicide favoured by the, XX. 799

Brahooes, IV. 641, 639.

BRAHOOICK MOUNTAINS, V. 272, IV. 640. Braid (Dr), on animal magnetism, XX. 432, 433, 434.

BRAIDING-MACRINE, V. 272. BRAILS, V. 272

Brain, V 272; (HUMAN) IL 818; XVII 668, 669—description of, by Galen, II. 753; and by Vesalius and Varoli, 759, 760— Willis on the anatomy of, 762mical researches on, 767-Soemmering on, 769-recent authors on, 770-struc ture of, 818-grey and white matter of, XVII. 669, 670, 681-weight of, III 3, 51-its anatomy, 51-convolutions, 52ventricles, 53-blood-vessels, 56-membranes, ib -its connection with the nu-

181-mental disorders the result of diseases in, XIV. 526-connection of the mind with, XVIL 556 et seq., 673-Gall's opinions concerning, X. 383, 384; XVII. 558, 559 et seq—its laws of action as the organ of mind, 560-connection between its size and mental energy, ib —diseases of, 699, 700—congestion in, 701-toxic-derangements of.

tritive organs, 58-its functions, 172; XIV. 526; XVII 556 et seq, 673—effect of unexpensated blood on, VIII

sure on, 698-Leuwenhoeck's obstions on, XIV. 349—insanity a disease of the, XIV. 526—idiocy dependent on some congenital disease of, 538--cerebral lobes, &c., XVII. 672—Spurzheim's

702-circulation in, and effects of pres-

illustrations of its structure and functions, XX. 519. See Cerebellum, Phrenology,

- (IN THE LOWER ANIMALS), anatomy of, III. 108-its size in proportion to BRANK, V. 276.

# BRA-BRA

the body in different animals, 104, 176 -supposed relation of intellectuality to the extent of its surface, 176-dispersed over the body in invertebrate animals. ib -the greater its relative size, the greater in general its sensibility, 178its small size in the horse, ib -of quadrupeds, II 773-of fishes, XIL 219 of the crustacea, VII 538—of insects, IX. 43-of the dolphin, XIV 223, 239 -of the whale, 239-its representa-tive in the mollusca, XV, 320-reptiles, XIX. 14 serpents, 48 its diseases in the domestic animals, XXI 574water in, 575

BRAINERD (David), V 272. BRAINTREE, town in Essex, V 272 Brair, a diamond in its rough state, V 272 Brake, in mechanics, XIV. 413-on railway carriages, XVIII. 795.

Brakel (Jan de), Dutch officer, V. 272 BRAKENBERG (Remier), Dutch painter, V.

Brakes, kind of harrow, II 272. Brama, the bream, V. 272; XII 302 See

BRAMAH (Joseph), V. 272-his filter, IX 581-his lock, XIII. 533.

BRAMAR'S HYDROSTATIC PRESS, V 274: IL 102, XII 75, 178—used in calendering. VI 91.

Bramante (Donato Lazzari), V 274-his character as an architect, III 452-his designs, ib

BRAMANTINO, name of several Milanese artists, V 275.

Brambanan, in Java, V 275 Brambilla, his work on insects, IX. 17. Brambling, bird, XVI 761.

BRAMHALL (John), D.D., archbishop of Armagh, V 275 Bramins See Brahmins.

BRAMPTON, V. 275.

BRAN, V. 275; IV. 379, as manure, IL. 406

Branas, VII 317. Branca, his steam apparatus, XX. 574 Brancepeth Castle, VIII 267

Branchellion, genus of annelides, XI 307. Branches of plants, V. 78, 83 subterranean, 79

Branchiæ, of the crustacea, VII 539the annelides, XI 293-mollusks, XV.

323, 326, 334 et seq.

Branchioz, priests, V. 275.

Branchioldella, genus of zoophytes, XXI. 982,

Branchiobdella, genus of annehdes, XI

Branchiopoda, crustacea, VII. 543 Branchipus stagnalus, VII. 543. BRAND-SUNDAY, V 275.

Brande (Prof), on the electricity developed in flame, VIII 567—on the alco-hol in porter, V. 332—his recipe for making ink, XII 383-his table of the alcoholic contents of wine, XXI. 889. Brandenburg, in Prussia, V. 275—history

of, XVIII, 646—agriculture, 665, 666-war with Sweden, XX. 851, 852.

Brandes (M), his galvanic experiments XXI 626,

BRANDEUM, V. 276.

Branding, V. 276-herrings, IX. 640, 641 Brandisite, mineral, XV 79. Brandling-worm, as a bast, III, 155, Brandon, town in Suffolk, V. 276, BRANDRITH, V. 276

Brandsten (P. W), his work on insects, IX. 17.

BRANDT, an alchemist, V, 276,

(GEBASTIAN), V 276. - (SEBASTIAN), V 276; IV. 438 n. 1. - (Count), VII. 742.

BRANDY, V. 276; VIII. 51; IX. 760-Teduction of the duty on, XXL 74-French, X. 247, 256-produce in Portugal, XVIII. 398—specific gravity of, XII. 89—imports of, into the United Kingdom, VIII. 785—mixture of with wines, XXI. 883, 888—wines converted into, 884. Brandywine, river, VII. 703.

- battle of, XXL 751.

# BRA-BRE

Branson (Dr Ferguson), on pature-printmg, XVIII 555

BRANTOME (Pierre de Bourdeilles), lord abbot of, V. 276—on chivalry, VI. 625, on duels, 626-on the character of L'Hôpital, XI 625

Brasenose College, Oxford, XXI 459.

Brasidas, V. 276, IV 206
Brass, V. 276, VI 497, VII. 350—annealing of, III 219-loss of tenacity in brass wire by exposure to the fumes of acids or damp an, ib—soldering with, V. 299—guns of, VI. 180; XI 133 et seq, 148, XVI 93—specific gravity of, XII. 88—magnetism of, XIV 26, VI 345—Corinthian, V 278; VII 368— brass colour, V. 278—leaf, 278—used ın coınage, XVI 353—brass goods manufactured at Birmingham, IV 731 Brasseur (de Bourbourg, abbé), on the an-

tiquities of Central America, XI 77 Brassicacem, nat order of plants, V. 182species used as food, IX. 760

Brassolis, genus of insects, IX. 208, Brauer (Adrian), Dutch painter, V. 278 Braula, genus of insects, IX. 259. BRAULS, or turbans, V 278

Braunite, mineral, XV 111 Braunsberg, in Prussia, V 278

BRAURONIA, ancient Greek festival, V. 278. Brava, ısland, XXI 645

Bravais (M), on halos, XVI 688, 689 Brawn, V 278

Brawny, barony in Westmeath, XXI 839 Braxy, a disease in sheep, II. 850; XXI.

Bray (Sir Reginald), V 278 ——— (Dr Thomas), V 278

(Gabriel), his life-boat, XIII. 445

in Berkshire, V 278

In Iroland, v 278

(Lough), in Wicklow, XXL 858.

BRAZEN SEA, V 278.

BRAZIER, V, 279.

BRAZIL, V 279; II. 703, 668—history of,

V. 279-physical geography, 291-statistics, 294-mountains of, II 670, XVII 595; their height, 645-revolutionary movements in, II 703—chimate of, 673, 703—aboriginal population, 691 -tradition of the deluge in, VII 719-British consuls in, 337-diamonds of, VIII 1, 2,4-trade with France, X. 260 -empire of, XV 412-Jesuits in, XII 755-languages of, XIII 224-pampas of, XVII. 608-bone caves in, 639-King John's policy towards, XVIII 383-metallic produce of, XV. 248, XVIII 461 -postal system, 424 sugars of, XX. 795, 796-cultivation of tea in, XXI. 81 -weights and measures of, 810-map of, II. Plate.

Brazil-NUT, V. 299, 192; IV 678; XVI 395

wood, V 299, 294, 190—as a dyestuff, VIII 287—specific gravity of, XII. 89

Brazilian branch of American aborigines,

II 677, Braziho-Guarani, South American tribes, IX. 349.

Brazing, V 209 Brazos de Dios, river in Texas, V. 300. Brazza, island, V. 300.

BREACH, V. 300. BREAD, V. 300—80 of, ib.; IV. 234 baking of, 378-leavened and unleavened, 378, 379, 381use of alum in, 381-test of, ib.-breadmaking, IX. 766-adulteration of, II.

154, IX. 770.

BREAD-FRUIT, V. 300, 189, 206

order of plants, V. 206.

Breadalbane, district of Perthshire, XVII. 454,

BREAKERS, V. 301 . Breaking of bodies across, XX. 760. Breaking-down of horses, XXI. 560. Breakwater, V. 801; VII. 328—Cherbourg, 302; VI. 527; XI. 219—at Plymouth, V. 306; XVIII. 17—Delaware, VII. 708—profile of, for harbours of

# BRE—BRE

refuge, XI 218-floating breakwaters, 223-mode of laying the foundations, XX. 722.

Bream, fish, V 310, XII 256—angling for, III 160—as food, IX 764

BREAMING, V. 310.
BREAST, V. 310; III. 72—hooks, in shipbuilding, V. 311—plate, 1b—plough, 1b; II. 274—wheel, V 311; XII 165; L

- bone, human, III 9---in mammalia, 76—in birds, 85

Breathing See Respiration Brebers. See Berbers.

Breccia, V. 311; XV. 141-ossiferous, ib . XVII. 639.

Brechin, in Forfarshire, V 311; IX 783 Breckshuach, disease in sheep, XXI 568 Brecon, or Brecknockshire, in Wales, V. 311, VIII 754.

town, V 312.
Bred, Pictish king, XIX. 743

BREDA, in Holland, V. 313 - treaty of, 425 : XI 577.

- (Jan Van), Dutch painter, V. 313. Bredow (Gabriel Gottfried), V. 313. BREECHES, V 313

BREECHING, or breechband, V. 313. - of gun-barrels, XI 97

Breeding of live-stock-of horses, II 338: XI 635, 646-of bulls, IL 341-of cattle, 843-breeding in-and-in, XI. 635

Breen (H), on the orbit of the planet Mars, IV 90

BREENBERG (Bartholomew), V. 313. BREEZE, V. 313.

Breeze-fly, IX. 245.

BREGENTZ, in the Tyrol, V 313
Bregmaceros, genus of fishes, XII. 308.

Breguet's "tapsy-key" for watches, VII 35—his pyrometer, XVIII 704
Brehar, one of the Scilly Isles, V. 313.

Brehon law, XIX 750

Brehons, andent Irish judges, V. 313.
Breiseau, in Baden, V 313.
Breislak (Scipione), geologist, V. 313—his views as to the geological nature of the site of Rome corrected by Brocchi, 673.

BREISLAKITE, mineral, V. 314; XV. 81. Breithauptite, mineral, XV 116 Breme (F. de), his entomological works,

TX 22. BREMEN, V 314 - coins of, XV 443-

weights and measures, XXI 810
——steam-vessel, XX. 164—description of. 666

Bremer (Frederica), her novels, XIX. 293, 702.

(Otto), his work on Chinese insects, IX 24, Bremner's pontoons, XI 221-method of.

forming a life-boat, XIII. 439. Brennage, V 314. Brenner (Fru), Swedish poetess, XIX. 697.

BRENNUS, V. 314. BRENTFORD, in Middlesex, V. 314.

Bientides, tribe of insects, IX. 138. Brentus, genus of insects, IX. 138.
Brenewood (Edward), V. 315.
Brescia, in Lombardy, V. 315—wines of,

XXI 886.

Breslau, V 315, XX 275—swarm of ants at, III. 265—bills of mortality, XV 601-peace of, XVIII 652-university of, 678; XXI. 492.

Bresson (Mons.), suicide of, X. 230. Brest, V. 315—population, X. 277—mode of preserving tumber at, VIII. 77, 211. BRET, local name of the turbot, V. 316.

(M.), on a mustake of Euler in equations, IX. 306,

BRETAGNE, or Brittany, in France, V. 316; X. 277. BRETHREN (the Plymouth), V. 316-of the

Christian Schools, ib—and Clerks of the Common Life, ib—and Sisters of the Free Spirit, ib.—of the Holy Trinity, 317—of the Observation, ib —Moravian, ib.; IV. 812-white, V. 817. BRETON (Cape), V. 317; VI. 205; XVI.

343, 345,

# BRE—BRI

Bretonnièrre (M de la), his plan for protecting Cherbourg, V. 302 Bretschneider, his definition of theology, XXI 181, 191 et seq. Bretwalda, Saxon tatle, VIII 656 BREUGHEL (Peeter), painter, V. 317. - (JAN), V 317. Breunnerite, mineral, XV 92 Breven (Mount), electrical phenomena on, VIII 583 BREVET, V. 317 BREVIARY, V 317; XIII. 516. BREVIATOR, V 317 BREVIARIUM ALARICIANUM, V 317; VI

743. Breviceps, genus of reptiles, XIX. 81. Brevicate, mineral, XV 75. Brevier type, XXL 401, 403 Brevipennes, tribe of birds, XVI 795. BREWER, V. 318-rate of brewers' licenses, XIII. 435-number of brewers in London, 660; in Scotland, XIX 804, 805. (Anthony), poet, V 317 (Mr), his method of dyeing nan-

keen yellow, VIII 300 Breweries, in Belgium, IV 625-in London, XIII 665-Prussia, XVIII 669-

Ireland, XII 521
Brewing, V 318—in England, VIII 731 Brewster (Sir David), I. 911-on philosophical instruments, 912-principal subjects of his researches, ib -on the law of polarization by reflection, ib -his discovery of the polarising structure induced by heat, ib; and by pressure, 913—discovery of biaxal crystals, 1b. on the double systems of topaz, &c, ib on the laws of metallic reflection, 914-metallic polarization, ib -his experiments on the absorption of light, ib -his analysis of the spectrum, 915his other scientific papers, 916—on apparitions, III 317—his burning sphere, VI. 15-on the colours of double plates, 647-on refracted colours, 644-his description of the game of curling, VII. 592—on electrical light, VIII 547—on the pyro-electricity of tourmaline, 559; and other minerals, 530, 560 et seq.—on the flash from Rupert's drops, 564 on aurora borealis, 587-his staktometer, XIL 87 —his experiments on capillary attrac-tion, 91, 92—on the form of drops, 102 -his experiment in connection capillary attraction, 103-his kaleidoscope, XIII. 37-on the polarization of light, 453—on the two poles of maximum cold, XIV. 11-on the analogy between magnets and unannealed glass, 24—on micrometers, 744, 745 et seg—his micrometers, 749, 750, 754, 755, 756, 760-on the microscope, 765 et seq -on lenses, 765, 768-his grooved sphere, 769, 770—his periscopic sphere, 772—his microscopes, 778, 787, 790—his polarizing microscopes, 788—on the illumination of microscopic objects, 794, 795, 796—his life of Sir I. Newton, XVI 210-his optical discoveries, 539, 544 581, 583, 584, et seq .- on photography, XVII 548, 550, 554-his photometer, -on Prof. Robison's writings, XIX 289 - his lenticular stereoscope, XX

690-his binocular camera, 1b. Brewsterite, mineral, XV. 76. Brexiacese, nat. order of plants, V. 188. Brianchon's theorem, X. 551. BRIANÇON, in France, V. 841.

-his treatise on the stereoscope

688; his explanation of the theory of,

Briaraceæ, family of zoophytes, XXI. 1004 Briare, canal of, X. 244.

BRIAREUS, V. 341 BRIBE, V. 341.

BRIBERY, V. 341-at elections, VIII. 770 —in China, VI. 566. Briciani, V 342.

BRICK, V 342-manufacture of, in Middlesex, XIV. 808, in Holland, XI. 588use of, for garden walls, 699—ancient Rome built of, III 444—specific gravity of, XII. 88-London built chiefly of,

# BRI—BRI

XIII. 663 - fire-brick, V. 345 - swimming-bricks, ib —in construction, VII 323 — wood-bricks, V 734 — pavingbrick, 735 - measurement of brickwork, 736-brick clay, XVIII. 439sun-dried, 430—of Assyric and Baby-lon, 431, inscriptions impressed on, 521—transverse strength and resistance of, XX 717, 718—bond in brickwork,

oi, A.A. 11.1, 118—nond in Drickwork, VII. 327—brickmaking, V. 343.
Brick-colour, dyeing of, VIII 314.
Bricklayers in London, XIII. 660. BRICKLAYING, V. 347, 731, 732.
BRICKNOGGING, V. 347—mode of measur-

ıng it. 737

BRICKTRIMMER, V 347 BRIDAINE (Jacques), V. 347.
BRIDAINE (Jacques), V. 347.
BRIDEGROOM, V. 347.
BRIDEGROOM, V. 348—in London, ib; XIIL

678; XVIII 569.

Bridge, V. 348; VII 324—natural bridges in America, III 130 — Sunderland bridge, XX. 807—bridges in England, VIII 722—in France, X. 245—Stirling bridge, XX. 701—bridge of St Esprit, in France, XVIII 291—in Glasgow, X. 655-London, XIII. 676-discussions regarding the London bridges, V. 354high-level bridge at Newcastle, XVI. 166-mode of destroying bridges in war, IX. 809-centring for, VI. 872, et seq—Rennie's bridges, XIX. 12—skew-bridges, XX. 314—in landscape gardening, XVII 773 See Aqueduct, Arch, Centre, Viaduct.

(Iron). See Iron Bridges. — (Railway), XVIII. 762, et seq— Egyptian, XII 609—commission on, I. 878 - girder-bridges, 876; XIL 587

et seq. See Girder.

(Suspension), I 875; XIL 589;
XX 548—the first considerable one in It is country erected over the Tweed, I 875, n 3—of Friburg, X 305—the Menai bridge, I 875, XIV. 494—M Navier's work on, I. 876—R Stevenson's plan for, XX. 695-of Peru, II 686, III 131, XVII. 461—China, II 688—Bootan, V 34

(Tubular), I. 876—the idea of, suggested by girder-bridges, 877 Menai Britannia bridge, XII 589, 607, 608; XIV 494; dimensions and strength of, L 877; Stephenson the responsible inventor, ib; his assistants, ib., use of the Bramah press in constructing, XII.

(Wooden), VI 267, 382-best form of, 385-in Switzerland and America, I 876; VL 384-R Stevenson's arches for, XX 695

in gunnery and music, V. 364 flying-bridge, 1b

BRIDGENORTH, in Glamorganshire, V. 364.
BRIDGENORTH, in Shropshire, V. 364.
BRIDGEPORT, in Connecticut, U S, V. 364. BRIDGE-TOWN, in Barbadoes, V 364; IV.

BRIDGEWATER, V. 364.
—— canal, XVI 54.

(FRANCIS EGERTON), duke of, V. his canals, 867; VI. 529; XIII. 179—his bequest to the British Museum 392.

- Treatises, V 364-Sir C. Bell's, IV. 631—Dr Chalmers's, VI. 405— Kirby's, XIII. 97—Prout's, XVIII 643. BRIDLE, V. 364; XI 684—mode of managing reins of, 674. BRIDLINGTON, in Yorkshire, V. 365-Quay

near, 1b. BRIDPORT, town in Dorsetshire, V 365.

- Viscount, XL 617. Brie (La), wools of, XXI 905. Brier, in law, V 365—Apostolical, ib. Brieg, in Silesia, V. 365

BRIEL, town in Holland, V. 365. BRIENNE LE CHATEAU, French town, V. 865. - battle of, X. 166

(Jean de), XVII. 197—his invasion of Egypt, VIII. 482.

# BRI-BRI

Brientz (Lake of), XX. 889. BRIEUC (St), town in France, V. 365.

Brig, vessel, V. 365
Brigade, V. 365—brigade-major, 1b.—
artillery brigades, XXI. 716. See Army. BRIGADIER, V 365.

BRIGANDINE, coat of mail, V 366. BRIGANTES, V 366, XXI. 845, 956. BRIGANTII, V. 366.

BRIGG, or Glandford Brigg, V. 366. BRIGGS (Henry), mathematician, -on logarithms, XIII 553, 554, 557, 560-his visits to Baron Napier, XV

- (WILLIAM), physician, V 366. Brigham, meeting of a Scottish parliament at, XVII. 290

Bright (Messrs), their electro-magnetic receiving instrument, XXI 103, 104

— (Sir Charles), on electric tele-graphs, XXI 95, 100, 103—his mode of receiving telegraphic signals by the sound of bells, 103, 104, 108

- (Timothy), his shorthand writing, XX. 675.

BRIGHTON, V. 366; XX. 838, 839—jetty or pier of, III. 491—excursion railway

trains to, XX. 840. Brightwell (Mr), on leeches, XI 306, 307. Brightmins, or Bridgetins, V 367. BRIGNOLES, in France, V. 367. Brihtric, king of Wessex, VIII 656. Brihtric, king of Wessex, VIII 656. Brihtric, Spanish town, V 367 Bril, (Paul), Flemish painter, V. 367 Brill, fish, IX. 634, 764 BRILLIANT, V. 367; VIII. 4.

Brindist, Neapolitan town, V. 367; XX 242—railway to Rome from, XV. 786
BRINDLEY (James), V 367—his aqueduct
at Barton bridge, III. 338—blasting
rocks in tunnelling first practised by, IV. 755 - on hydraulics, XII. 113, 121.

Brine-worm, VII 543-Rev Mr Rackett's account of, 1b.

Brine See Salt-springs. Brinjarrees, XI 466.

Brim, V. 367

Brinkley (John), bishop of Cloyne, I 864 n—on the parallax of the fixed stars, 864; IV 81.

BRINVILLIERS, Marchioness of, V. 368her poisonings, III 330. BRIOUDE, French town, V. 368

Brisbane (Sir Thomas M.), governor of N S Wales, IV. 272—his catalogue of stars, 95—his pendulum observa-tions, IX 573, 574—on Encke's comet, I 857—observations at his observatory at Makerstoun, XIV. 688.

m Australia, IV. 278, 282.
Brisson (Mathurin Jacques), V 368—on ornithology, XVI 728—his and Cadet's experiments with a burning lens, VI

BRISSOT (Pierre), physician, V 369. - de Warville (Jean Pierre), V. 369, X. 52, 67, 79-execution of, 82.

Brissotine faction, X. 71
Brisstles, V. 369—of plants, 75. Bristlewort, order of plants, V. 215.
Bristlewort, V. 369; X. 682; XX. 410, 411—
its surrender to Prince Rupert, V. 403

- election of Burke as member for, 776 - rots at, in 1831, 662 - fire at, in 1777, 504—shipping belonging to the port of, VIII 738—alternation of beds in the coal-fields of, XV. 162 - iron bridges at, XII 582—post-office statistics, XVIII. 416—early shipping of, XX. 124.

m Rhode Island, V. 371; XIX.

town in Pennsylvania, V. 371. CHANNEL, V. 371. DIAMONDS, V. 371.

Bristow (Captain), his discoveries in Aus-

trainsia, IV. 268.

Britain, V. 372, IX. 398—history of, V. 372—walls of Hadrian and Antoninus, III 281—agriculture of, II. 248—army of, III 662—progress of art in, 712—culture of, compared with that of

# BRI—BRI

France and Austria, IV. 313-her interest in the balance of power, 392-possessions in America, II 707—barracks, IV. 470—trade with Buenos Ayres, V 726; and with Chile, 551-war with China, 596-date of the revolution of 1688, 667—literary chronology of, 707 comage, VII. 69; has not attained the highest degree of excellence, 1b .- coaltrade, 44-annual production of coal and extent of coal area m. 126, 127penal colonies, 139—passion for increasing the navy to excess, 145-colonies, 147-combination among workmen in, 161—commerce, 189; its advantageous situation for, XIV 277—navigation laws, VII 145, 189—commercial treaty with France in 1786, 190-exports to North America, India, and West Indies, 1b —military commissions in, 201 et seq. -communist opinions in, 214, 216 books published in, 356-law of copyright, 355-corn-laws and corn-trade, 374-quantity of corn produced and consumed in, 395-American war, 409 -cottage system in, 433-cotton-manufacture, 440, 449; effects of, on the condition of the country, 454 cutlery, 600 - dary management, 621 - deaf and dumb in, 686, their proportion to the population, 687—Druids, VIII. 183—expeditions to Egypt in 1798 and 1807, 489, 492-emigration from, 651, 652-mountains of, IX. 383-fairs, 468 —fisheries, 559—threatened invasions by the French, X. 108, 121; Napoleon's plan of invasion, 136—rupture with France in 1793, 76—French trade with, 259, 261—constitutional government of, 736—funding system, 328; see Debt, National-rise of British power in India, XI 481 et seq, causes of success there, 510; internal policy, ib et seq—hounds, 762—hunting, XII. 33 et seq—country gentlemen, 33—insurance companies in, 406-iron manufacture and trade, 544 et seq, 577-iron-bridges, 575 et seq.—irrigation in, 619—British libraries, XIII 389—origin and development of a medical profession and literature in, XIV 460, state of, in Britain, 463, 464; future prospects, 466-commencement of medical jurisprudence in, 424-mines, XV 219 et seq.—gold in, 233—its mineral wealth and produce, 247, 248—trade with India, XI 460, 461, 462—British presidencies in, 463—monarchy, XV. 412—education, 823; hints for its improvement, 826-religious missions, 270 et seq -money, 438, 441, 443-enumerations of population, 610-crown of, XL 335—newspapers of, XVI. 180—present state of the newspaper press in, 191, 192—nobility of, 281—ancient comage 361—school of painting, XVII. 77, 83 et seq—parliament of, 292—difference in the mean annual rain on the west and east coasts of, 614-imports from Jamaica, XII. 679 - trade with Peru, XVII. 473—system of mountains in, 595—planting, 754—increase of population, XVIII. 342—post-office, 402, 403, 406, 407, 424, organization of, 415-precedence of rank in, 451-alliance with Prussia in 1756, 652-railways, 752 et seq.; statistics of, 784, 785, 786, 787 et seq.—Cæsar's invasion of, XIX. 324—the Romans in, 336, 340, 346, 351-alliances with Russia, 488, 489, 492—war with Russia, 493—savings-banks in, 656; suggestions for their improvement, 670—manufacture of soap, XX. 367-somnambulism, 430 -naval superiority, 116-shooting, 209 —peculiarly the land of sportsmen, 211 —war with Spain in 1796, 471; and in 1804, 472-trade with Sweden, 868-im. ports of tea into, XXI 91-duty, price, and consumption of tea, 92-imports. deliveries, and exports in and from, ih establishment of French weavers in, 780 - trade with Turkey, 385 - war

# BRI-BRO

with Russia, 375; with the United States, 434, 440 - trade schools and museums, 829-consumption of wine in, 891; duties on wine, 890-supply of wool, 906-woollen manufactures, 916, 917—trigonometrical survey, 330—weaving, 780 et seq See Chronological Table, VI 681 et seq; also England, Scotland.

BRITAIN (New), V. 672; IV. 264; XVI

- Royal Asiatic Society of Great Britain and Ireland, III 759 Britannia Bridge over the Menai Straits, XII. 179, 589, 607, 608, I 877 Britannica, plant esteemed by the Druids, VIII 188

BRITANNICUS, son of the Emperor Clau-

dian, V 672 · XIX. 337.

British gum, V 672 , XI. 94.

Museum, V. 672 ; XIII. 674—Dr Birch's bequests to the, IV. 726-hbrary of the, XIIL 389-acorolites in, XIV 632, 635—coms and medals in, XVI 351, n. 3—Peiresc's MSS in, XVII 367—Egyptian antiquities in, XIX. 849 and n. and Foreign Bible Society, IV

703. BRITTANY, V. 672; X. 277 See Bretagne,

Brittinger (C.), his entomological work, TX. 23.

Brittleworts, plants, V 218, 147. Britton (Mr), his proposal to term Gothic architecture "Christian," III. 447—on

pointed architecture, 457, 481, 482. BRIVES-LA-GAILLIARDE, V 672 BRIXEN, on the Tyrol, V 672 BRIXHAM, in Devonshire, V 672; XXL

BROACH, in Hindustan, V 672. - an awl or bodkin, V 673 - an ornament for fastening a plaid, 673.

Broad, various meanings of the word, VIII 11. Broadcast sowing, II 274-of wheat, 308. Broad-Piece, V. 673—broad-side, ib. Broadshare-ploughs, II. 271

BEOADSTAIRS, in Kent, V. 673 BROCADE, V. 673.

Broccer (Giovanni Battista), V. 673. Broccoll, V. 673—culture of, XI. 738.
Broch (J. K.), his work relating to in-

sects, IX. 15. 

giant or spectre of the, III 315. BROCKLESBY (Richard), physician, V. 673; XXI. 962, 963,

BRODEAU (John), V. 674. BRODERA, or Baroda, in Hindustan, V. 674.

Broderip (W. J), on the mollusca, XV. 327—on the Phascolotherium, XVII.

BRODICK BAY, in Arran, V. 674; III. 675.

—— Castle, III. 675; VI. 27.

Brodie (George), on the Scottish covenanting clergy, IV 371, n., 372—his edition of Star's Institutions, VII. 630. (Sir Benjamin), on the effect of the physical condition on memory, XV

287

—— (P. D.), his work on fossil insects, IX. 22, XVIL 103 BRODY, town in Galicia, V. 674. Broglia (Antonio), his work on silkworms,

TX. 22. Broglie (M. de), X. 210, 211. Brogniart (M.), his classification of rep-

tiles, XIX. 16. Brogue, V. 674. Broiling of meat, IX. 766. BROKE (Sir Robert), V. 674. Broken-knee, in animals, XXI. 559. Broken-wind, in animals, XXI, 571. BROKER, V. 674. BROMBERG, V. 675. BROME (Alexander and Richard), V. 675.

BROMELIA, V. 675. See Pine Apple Bromeliacez, nat. order of plants, V. 212.

#### BRO-BRO

Bromides-of mercury, VI. 498-silver, 1b See Chemistry.

BROMINE, V. 675, VI 469; XV. 64-as a test for gas, X. 429-its poisonous quahty, XIV 435.

Bromite, mineral, XV 107. BROMLEY, town in Kent, V. 675 Bromo, volcanic mountain in Java, XV.

BROMSGROVE, in Worcestershire, V 675. BROMYARD, in Herefordshire, V. 675 Bronchial tubes, III. 66

Bronchitis, V. 675—in the domestic ammals, XXI 572.

Bronchocele, XX. 815 Bronchotomy, XXI. 572 See Tracheotomy.

BRONDSTED (Peter Oluf), V. 675.
BRONGNIART (Alexandre), V 676—on fossil plants, 232, 233, 234—director of the Sevres porcelain factory, XVIII.

438—his pyrometer, 705, 444 Brongmartin, mineral, XV 96. Bronte, in Sicily, V 676 BRONTEION, V 676.

Brontes, genus of fishes, XII 262, 260.
BRONTOLOGY, V. 676
BRONZE, V 676; VL 497; VII 351;
XIX 848—cannon, VI 181, III. 703;

V. 40-casting, 676

- antiquities of, III 419; VII 420. - period of Aichæology, III 419 Bronzing, V 677

Bronzino (Angiolo), V. 678.
Bronzino (Angiolo), V. 678.
Bronzite, mineral, XV. 82
BROOKBANK (Joseph), V. 678
BROOKE (Frances), V 678.
(HENRY), V 678

(Capt), v 678 — (Capt), on aurora borealis in Norway, IV 249.

- (Mr), on expansion by electricity, VIII 589-on the Leyden jar, 613

— (Lieut), his mode of sounding, XVII. 576; XX 26.

— (Mr), his photographic register,

XIV. 666 (Sir James), V. 48, 49, 50 (Sir Arthur de Capel), on Lapland,

XIII. 235 et seq. Brooke's steelyard electrometer, VIII. 619 BROOKES (Bartholomaus Heinrich), V. 678

—— (JOSHUA), V. 678 Brookite, mineral, XV 110. BROOKLYN, V. 678; XIII. 683; XVI. 223

BROOM-FLOWER, order of knights of, V

Broom-rape order of plants, V 202. BROOME (William), English poet, V. 678—his share in Pope's version of the Odyssey, XVIII. 330

Broowing of a ship, V. 679. See Bream-Brora, in Sutherlandshire, coal-field of,

V 236; XX. 841 Broscus, genus of insects, IX. 91. Brose, V. 679.

BROSELEY, V. 679. Brosmius, genus of fishes, XII. 270

Brossard (Sebastien de), V 679.
Brosses (Charles de), V. 679—on the division of the lands and islands of the Austral world, IV. 251.

Brosset (M.), on the language of Georgia, X. 569

BROTHER, V. 679 - foster-brothers, ib. brother-german, X. 570-Brothers of the Rosy Cross, V. 680-duties of brothers and sisters, XV. 569.

Brotherhood, opposed to Cursing and Swearing, order of, XIII. 121. Brotherhood (Holy), XX. 465. Brotherton tubular bridge over the Aire,

XII. 609. BROTTER (Gabriel), V. 680, Brotula, genus of fishes, XII. 270. Brouand (T.), his entomological work, IX.

17. Brough, in Westmoreland, V. 680: XXI.

- Hill, fair at, XXI. 842.

# BRO-BRO

Brougham (Lord), on the balance of power, IV. 388, n., 389, 390-on the droits of the Admiralty, V. 630 - his education bill in 1820, 630 — his motion on the influence of the Crown, 635-his resolution for the removal of taxes, 636-attack on Canning, 639on the megnality of the Irish law, 1bhis defeat in Westmoreland, 647-his motion for law reform, 652-on the law of divorce, VIII. 71, n 1, 72, n 1-on the law of copyright as regards foreigners, VII. 361—his alterations in the law of bankruptcy, IV. 417-on Dr Black as a lecturer, L 927-his investigations on hght, 893, XVI 544—on instinct, XII 391—on the Earl of Chatham, XVII 724—on Dr Robertson, XIX. 229, 231 -on Lord Stowell, 826-on Sheridan's political life, XX. 109-his act against the slave trade, 323-motion for the abolition of slavery, 253; of slave apprenticeship, 326-on Adam Smith's appointment to the Excise, 342, n. 5-on natural religion, XXI 181—on Wilber-force, 865, Washington, 765, — Hall, XXI 844

Broughton (Hugh), V. 680
———— (Lord), on Rome, XIX. 362, n. 1,

365, 366, 367. (THOMAS), V 680

Broukhusius (Jan), V. 680. Broun (Mr), on the moon's influence on the magnetic needle, XIV. 19. BROUNCKER (William, Lord), V. 680-

the quadrature of the circle, XX 523 BROUSSAI, or Brusa, in Anatolia, V 680 BROUSSAIS (François Joseph Victor), V 681.

BROUSSONET (Pierre Marie Auguste), natmalist, V. 681

Brown (Capt), on iron cables and rigging, XX. 23.

(Charles B), his novels, XIX. 278 (Jony, DD.), English divine, V 681.

(John, DD), author of the Self-interpreting Bible, V. 682, - (JOHN), founder of the Brunonian

theory of physic, V 682

(J B.), his account of Montreal,

VI 133.

(Mr), engraver, VIII. 808 --- (ROBERT), founder of the sect of Brownists, V. 682, 688, XII 368

(Robert), on active molecules, III 205, 206, n. 1-on the arcola or nucleus of a cell in plants, II 783—on the plants of Australia, IV 261.

- (R.), of Manchester, his method of ventilating by means of gas, X. 427 - (Dr Samuel), his alleged conversion

of carbon into silicon, VI, 447—on the character of D. Scott, painter, XIX. 812.

— (Sir Samuel), his chain bridge across the Tweed, L 875, n. 3-chain-

piers at Brighton and Newhaven con-structed by, V. 367; XI 223. —— (Stephen), lord-mayor of London, XIII. 114.

- (Dr Thomas), metaphysician, V. 683—his observations on Darwin's Zoonomia, I. 410-his tract on Causation, 1b -assisted in establishing the Academy of Physics in Edinburgh, 411—on the benevolent affections, 297—Welsh's Life of, 410, n. 2—his studies and character, 411-style, 412-his propensity to quote poetry, ib.; particularly that of Akenside, II. 434—his poetical character, I. 413—his philosophy, ib et seq—on alliteration, II 593—on second sight, III. 318-on apparitions, 1b-on rectitude and virtue, XV. 536-on Dr Adam Smith's theory of rectitude, 546 -his theory of moral distinctions, ib. -his refutation of an argument on rectitude erroneously ascribed to Cudworth, 549—on selfish actions, 553—on metaphysics, XIV. 565, n. 5, 567, 569 —on Adam Smith's theory of moral sentiments, XX. 339, and n. 2.

(THOMAS), poet, V. 683.

# BRO-BRU

Brown (Thomas), his improvements in capstans, VI 225.

(ULYSSES MAXIMILIAN), general, V.

(Dr William), on Hindu converts to Christiamity, XV. 273

(WILLIAM), English poet, V 685
(WILLIAM LAURENCE, D D), V. 685.
dyeing of, VIII. 307, 320—vaneties of, XV 59—people of that colour, VII 222

- spar, XV 93 Browne (Edward), V 686

(Isan Hawkins), V 686
(Isan Hawkins), V 686
(Isan Hawkins), V 686
(Isir Thomas), V 686—on the cameleon, XIX 37, n 2—on the medical uses of the Echini, XXI. 990—quotation from, 991, n 2

(Sir William), V 687. —— (Sir William), V 687.

—— (William George), V 687—on the sources of the White Nile, XVI 269

- on the guana, XIX. 34.

Brownie, V 687; I 464. Brownsrs, religious sect, V. 688, 682.

Brownlee (James), on the density of steam, XX 560—on gaseous steam, 570-his formulas for the work and

heat of dry saturated steam, 626. Brownrigg (William), V 688 BRUAR, Falls of, V 688; IV 751

Bruce (Alex), advocate, his writings against Wodrow, XXI. 897

- (Edward), his invasion of Ireland,

Cudwald), mis invasion of Ireland, KII. 470, VIII. 217.

— (JAMES), V 688—his travels in Abyssmia, II. 55, 57—on the hyemas of Abyssmia, XIV 167, 168—on the Jerboa, 185—on the sources of the Bahranger. el-Azrek, XVI 269-his algument for polygamy, XVIII 266-on the balsam of Mecca, IV. 401—on tortoise-shell, XIX. 20—on hzards, 27—on the cerastes, 45-on the mundations of the Nile,

(Michael), poet, V 691.
— (King Robert), V. 691, XIX. 755;
VIII, 239, 258—Barboul's poem on, IV.

——— (Robert), on the ten-plant in Assam, III. 763, XXI 81.
Bruchelæ, tribe of insects, IX. 137

Brucher (Antoine), inventor of the coining-press, VII. 71 BRUCHSAL, in Baden, V. 691.

Bruchus, genus of insects, IX. 138 Brucia, poison, XIV. 438 Brucite, mineral, XV. 80, 89. Bruck, in Austria, V. 691

BRUCKENAU, in Bavana, V 691 BRUCKER (James), V. 691-estimate of his

talents, I 283. Brückmann on birds, XVI. 728. Brue, river, XX. 410,

Brueys, French admiral, V. 564; XVI. 135. Bruges, Belgian city, V. 693—commerce of, VII. 187—early newspaper of, XVI. 202-the seat of the chief factory of the Hanseatic League, XI, 215

Brugmans, diamagnetism obscurely anti-

capated by, I 981, Brugsch (Dr Heinrich), on demotic characters, XI. 371 n. 7, 377 n. 3, 430-his Grammaire Démotique, 409, 431—func-real papyrus published by, XVII. 264.

Bruguère, reference to his arrangement of animalcules, III 199. Brum, or Bruyn (John de), V 694. Bruse, surgical treatment of, XX 880

Brullé (A.), his works on insects, IX 17. Brulliot (Franz), V. 694. Brumoy (Pierre), V. 694.

BRUN (Charles le), painter, V. 695; XVII. 76, XXL 20.

· (Pigault le), character of his novels, XIX. 289.

or Brunn (Malte-Conrad), modern geographer, V 695; XIX. 696—on the birds of Brazil, V. 294—on the climate of Asia, III. 787-on the languages of Lapland, XIII. 244.

· (Johan Nordal), Danish author, XIX 698

# BRU-BRU

Brunanburgh, battle of, VIII. 658 BRUNCK (Richard François Philippe), V. 695.

BRUNDUSIUM, V. 695, 367.

Brunehaut, X. 4, 5, 6
Brunel (Sir Marc Isambart), V. 695biographical sketch of, I. 878—his block-machinery, 879, IV 783 et seq—impulse given by his ingenuity to mechanics, I 879—construction of the Thames Tunnel by, ib -variety of his works, 880—a diving adventure of, VIII 56his saw-mill at Chatham, 81.

— (I. K.), iron bridges constructed by, XII 601—his assistance in forming the Thames Tunnel, V. 696-his introduction of the broad gauge on the Great Western Railway, XVIII. 753, I 885. n.

BRUNELLESCHI (Filippo), V 696, III 450
—his architectural designs, 452.

Brunet (J C), his Bibliographical Manual, IV. 714.

Bonaparte satursed by, VIII 156. BRUNI (Leonardo), V. 696

Bruniaceæ, nat order of plants, V 194.

Brunn, in Moravia, V 696 Brunne (Robert de), VIII. 795. See Mannying.

Biunner (J C), his anatomical discoveries, TI, 763

Brunnich (M. Thomas), his entomological works, IX. 6—his classification of entomologists, ib -his Ornithologia Boreahs, XVI 728.

Brunning's (M.), his tachometer, XII 143 -experiments in hydraulics, 144, 145 BRUNO, founder of the Carthusian order

of monks, V. 697.
——(GIORDANO), V 697—his pantheistic system, XVII 233

Brunoniaceæ, nat order of plants, V. 197 Bruns (Paul James), a decipherer of pa-limpsests, XVII 210

Brunswick, V. 697; X. 589, 591, 593, XII 210—coins of, XV 441, 443—postal system, XVIII 424—weights and measures, XXI. 810.

- (Frederic-William), Duke of, killed

at Quatre Bras, V. 698
——in Maine, V 698.
BRUNTISLAND, V. 698. See Burntisland.

Brunton's gas retort, X. 412

revolving grate, XX 855
Brusa, in Turkey, XXI 380, 381—manufactures of, 382—silk, 384.

BRUSH, V 698-tail of a fox, ib.-brushwheels, 1b

Brushing, process in woollen manufacture, XXI. 923

BRUSSELS, V. 698-revolutionary troubles in 1830, IV. 003, 604, XL 580 - attempted entrance of the royal troops in 1830, IV 605-university of, 620; XXI 492-academies at, IV 622-lace, XIII 142, 143—carpets, VI. 271—na-tional congress at, IV. 606—military court at, 614—Jewish synagogue at, 617 -royal musical conservatory, 622library, 623-museum of, 623-hbranes, XIII 422-meteorological observations at. XIV 687-early newspapers of.

Brussels' sprouts, culture of, XL 737.

BRUTE, V. 700—Buffon on the faculties of brutes, I. 177—instancts of, XII 391 - language of, XIII. 185 - better provided than man with the means of supplying their own wants, I. 452-worship of, in Egypt, VIII. 439; XV. 765 See Comparative Anatomy, Animals, Brain of the Lower Animals, and the zoological articles.

BRUTON, town in Somerset, V. 704. BRUTTII, V. 704.

BRUTUS, or Brute, a fabulous king of Britain, V 704.

- (Lucius Junius), V. 704, XIX.

- (MARCUS), V. 704; XXX. 327, 329 -apparition seen by him at Philippi, III. 310 and n. 3. BRUX, Bohemian city, V. 704.

# BRU-BUC

Bruyer (William), his iron bridges, XIL 581-82.

BRUYÈRE (Jean de la), V 704—on Rabe-lais, XVIII 742—his version of Theophrastus, XXI. 220 Bruyn (Cornelius), V 705.

Bryaceæ, sub-order of mosses, V. 217 BRYAN, or Bryant (Sir Francis), V 705 Bryanites, or Bible Christians, XIV. 694.

BRYANT (Jacob), V. 705-on the deluge, VII 711-15-on mythology, 711-his hypothesis on the dispersion of mankind, VIII. 45-on the Amazons, II 650.

BRYAXIS, Athenian statuary, V. 706. - genus of insects, IX. 153 Brycinus, genus of fishes, XII. 246. Brydon of Moodlaw's Cheviot sheep, II

Brydone's account of Mount Ætna, II 189, 190-Dr Daubeny's strictures on his opinion as to the antiquity of its lava beds, 192—his account of a de-structive cloud, VII 39

BRYENNIUS (Manuel), V 706. BRYONIA DIOIGA, plant, V. 706, 193 Bryony, black, V. 210

BRYOPHYLLUM, genus of plants, V. 706, 94, 194.

Bryozoa, fossil animals, XVII. 97 Bryson, geometer, X. 498—on the quadratuse of the circle, XX 520.

Bryson's siphon barometer, IV 461-his hourly barometric register, ib Bryttus, genus of fishes, XII 277 Brzesc, town in Russia, V 706. BRZEZANY, in Galicia, V. 706. Bua, island, V 706.

BUAT-NANÇAY (Louis-Gabriel, Count du), V. 706

- (Chevalier de) See Dubuat. BUBASTIS, one of the names of Isis, V 706; VIII 437, 498

- Egyptian city, VIII 498 Bubble-shell, XV. 373. Bubo, genus of birds, XVI 746.

BUBONA, V. 707. BUBULCUS, V 707. Buc (Sir George), V 707. Bucaneer, V 707, XL 255—of the Musquito shore, XV 660

BUCCARL in Austria, V. 713 Buccellarii, V. 713. BUCCINA, ancient kind of trumpet, V 713.

Buccinidæ, family of mollusks, XV. 386 Buccino, Neapolitan city, V 713

Buccinum, genus of mollusks, XV. 386, 389-dye from, VIII. 272; XX. 906, XXT 407

Buccleuch (Duke of), his rental, VIII, 237 -lands in Dumfriesshire, ib -his policy adverse to manufactures, XI. 247-letting of his farms in Roxburghshire, XIX. 455

Bucco, genus of birds, XVI. 778. Bucellas, wine, XXI. 885-alcohol in, 890.

BUCEPHALA, V 713; XIII. 769. Bucephalus, genus of serpents, teeth of,

XVI 432

BUCER, or Martin Kuhorn, V. 713; XIII. 725, 739, 740

Buceros, genus of birds, XVI 773. Bucn (Leopold Von), V 713—on the elevation of the coasts of Sweden, XX 860—on the regions of vegetation in Teneriffe, VI. 164—on the geology and botany of Lapland, XIII 234, 235 et seg.

BUCHAN, district of, V. 714; IL 32 - (Capt David), his arctic voyage, XVIII 171

- (Dr), unusual case of atmospheric reflection described by, XVL 691.

(Mrs), fanatic, IX 481.

BUCHANAN (George), V. 714-character of his work De jure Regni apud Scotos, I. 31 -Ruddiman and Burman's editions of his works, V 788; XIX. 461-his Latin version of the Psalms, XII. 803-his scholarship, XVII. 528.

— (A. C.), on the prospects of emigrants to Canada, VI. 148.

# BUC-BUE

Buchanan (D1), of Louisville, U.S., on phreno-mesmerism, XX. 440.

- (Dr F.), on the inhabitants of eastern Asia, III. 748-on the inhabitants of Canara, VI 162.

(President of United States), on

banking, XV. 493

— (W. M), on the temperature and pressure of steam, XX, 565. BUCHAREST, in Wallachia, V. 721; XXI 683.

BUCHOLZ (Christoph Friedrich), V 721. Bucholzite, mineral, XV. 86. Buck, V 721

BUCKEBURG, German city, V. 721. Bucket, safety, XIII 448 Bucket-wheels, XII. 167, 183 Buckharia See Bukhara. Buckhounds, master of, XI. 776. Buckre, village in Banff, V. 721.

Buckingham, V. 721
——— (Dukes of). See Villiers and Sheffield.

(J S), on the runs of Babylon, IV 345—on Baghdad, 362, 363—Diarbekir, VIII 6—Palestine, XVII 188 his transportation from Calcutta, XVI. 203.

Palace, XIII 668-effect of smoke on the walls of, XX. 712. Buckinghamshire, V 721

and value of property, VIII. 754 Buckland (Dr), his Bridgewater Treatise, V. 364-on the Deluge, VII. 722-on the value of the produce of British mines, XV. 247—on the dentition of the Megalosaurus, XVI. 434-on the teeth of Iguanodon, 435, 436-on the coprolites of the cave at Kirkdale, 460-on the Plesiosaurus XVII 146-on the vegetation of the carboniferous period, 641.

Bucklandite, mineral, XV. 85 Buckle (Mr), his eulogium on Smith's Wealth of Nations, XVIII. 223, n 2; XX 341-on suicide, 800

BUCKLER, V. 722-votive bucklers, 723. Buckowine, IV. 314, 309 BUCKRAM, V. 723

Buckthorn, order of plants, V. 189.

— XVII. 762 — sea, V 205, XVII 764. Buckwald (B J), his work on insects IX. 4.

BUCKWHEAT, V 723, 204; II 302, XVIL 630-its culture in France, X. 246 - order of plants, V 204,

BUCOLIC, V. 723 BUCOVAR, in Hungary, V 723 Bud and Budding. See Buds. Buda, in Hungary, V. 723—wines of,

BUDEUS, or Budé (Guillaume), V. 723—character and works of, I. 29, n. 7; XVII. 523.

BUDDÆUS (John Francis), V 723 BUDDHA, or Buddhu, Hindoo deity, V. 723, VII. 715, 716; XV 762—sacred books of, X. 722—his worshippers in Ceylon, VI 397-in India, XI. 468 Japan, XII 695-in Canton, VI. 200in Tibet, XXI 247.

Buddicom, his valve-gearing of locomotives, XX. 585,

BUDE-LIGHT, V. 725; X. 427 BUDGELL (Eustace), V. 725 BUDGET, V 725; VI 412. Budissin, in Saxony, IV. 514

BUDNMANS, heretics, V. 725
Buds, flower-bud, V. 121-leaf-buds, 78 —propagation by, 167—propagation by budding, XI 694, 704.

Budun, Ceylonese deity, V. 725. Buduschan, IV. 359.

BUDWEIS, in Bohemia, V. 725. Budytes, genus of birds, XVI. 757.

BUENAIRE, Island, V 726.
BUENOS-AYRES, V. 726, II 704—climate
of, 678—taken by the British in 1807, V. 602 - failure of General White lock's attack, ib.—British consul at, VII. 337—foundation and history of, XVII. 780—founded by Mendoza in 1525, IL 699-pampas of, 672; III. 129;

#### BUF-BUK

XVII. 608—weights and measures, XXI. 810.

Buff-colour, dyeing of, VIII. 318. Buff leather, XIII. 305.

BUFFALMACCO, Florentine painter, V. 728: XVII 62.

BUFFALO, V. 728; XIV. 215, XVII. 632 —in Java, XII. 704—Egypt, VIII. 432 —Sumatra, XX. 804—fossil, XVII. 170 - city in the state of New York, V. 728; XVI. 219—harbour of, 214.

Buffalo-fish, XII 301. BUFFET, V 728.

Buffier (Claude), V. 729—mistake of, relative to a theory of Descartes, L 63 and n. 4-coincidence between his train of thinking and that of some Scottish metaphysicians, 215-his treatise on First Truths, 357—his style and ethical doctrines, 358—Voltane's opinion of, 215, n. 2—his theory of beauty, IV. 539.
Buffon (George Louis le Clerc, Comte de),

V. 729-on the faculties of man and brutes, I. 177-78-on the nature of mathematical evidence, 178-on the soul III 172-on the original diversity of species, 174-his definition of species, 1bon animalcules, 204-his theory of the formation of bees' combs, IV 578—his burning mirrors and lenses, VI 5, 7, 12, 13, XIII 472-his connection with Daubenton, VII 662; their characters contrasted, ib—on the horse, XI. 633 on hybrids, XIL 63-his connection with Lacepede, XIII 146—tables of mortality published by, XV. 633—Sir J. Leslie's translation of his Natural History, XIII. 844-his work on the natural history of animals, XIV. 127—on brids, XVI 729, 775, 780, 806—on pro-bability, XVIII. 622—Smellie's translation of his Natural History, XX. 837his experiments on the strength of oak bais, 773; observations on, 774; practical rule deduced from, 776-on the age for felling timber, XXL 270; season and mode of, 273, 274—on the production of entozoa, 975.

BUFFOON, V 729. Bufo, genus of reptiles, XIX. 79. Bug, V. 729—horvest-bug, III 389—bed-bug, IX 163; mode of destroying, XXI -wood-bugs, IX. 161

Bugares, kind of heretics, V. 729. Bugeaud (General), governor of Algiers, II 575.

Bugia, in Algeria, V. 730 Bugis, race of people in Celebes, III. 749; V. 7—their commerce, IIL 756.

Bugle-horn, V. 730 BUHL, V 730.

Buhle (C. A. A.), his works on insects, IX. 20.

- (M), on Kant's Critique of Pure Reason, I. 190 and n. 1-his remarks on Cudworth, 191, n. 1—on Kant's argument for free agency, 197, n. 1—his History of Modern Philosophy, 283.

Buhr-stones, rock of the Abbey Craig, near Stirling, a substitute for, VL 750. Builder, V. 730.

BUILDING, V. 730-transmission of sound by stone, IL 101—deadening of sounds in rooms, 106-calc-tuff as a building stone, VI. 68-Purbeck and Portland stones, VIII 111-expansion of building materials by heat, XI 268-strength of different kinds of wood, XX. 170, 171, 172, 757, 779 et seq.; and of stone, 717, 718, 758. See Architecture, Carpentry, Joinery, Stone-Masonry, Brick, Timber. Buildings for a library, XIII 377.

Buildings, lightning conductors for, VIII. 609-warming of, XIX. 613.

Buildwas iron bridge, V. 363; XII. 576, 578. BUILTH, town in Brecknockshire, V. 757,

Buist (Robert), on parr and smolts, IX. 593, 595, n. 1-on the destruction of sal-

mon ova by trout, 617
BURHARA, V. 757, 759—climate of, III.
786—commerce of, 755—language, XIII. 914. See Turkestan.

# BUK-BUN

BURKUR, island and fort of Scinde, V. 760. Bul, Hebrew month, V. 760. BULAK, V. 760, VI. 61. BULAM, or Bulama, V. 760, IV. 785 BULARCHUS, V. 760. Bulb, V. 760, 79—pseudo-bulb, 78 of thermometers, XXL 221. Bulboceras, genus of insects, IX. 121. Bulbous plants, XL 749-in South Africa XVII. 629. Bulfinger on the strength of beams, XX. 765.

Bulgaria, in European Turkey, V 760-coast and ports of, IV 742—languag of, IX 391; in Greece, XI 22 -language

Bulgarians, their wars with the Roman emperors, VII. 313.

Bulimus, genus of mollusks, XV. 375. Bulinus, genus of mollusks, XV. 373-B. ovatus, 389

Bulk, of a ship, V. 760—bulk-heads, 1b.; XX. 197.

Bull, V. 760; XIV. 214 -- breeding, II. 341-importance of the pedigree, 343-origin of the sign of the Bull and Mouth, III. 323-reckoned sacred by the Hindus, IV. 644.

- (GEORGE), bishop, V. 761. - (JOHN), V. 761. - ecclesiastical letter, V. 760 — in

Cœna Domini, 761—Golden, ib—Silver, ib.—Leaden, ib—Waxen, ib BULL-FEGHT, V. 761—IN Spain, XX. 494. BULL-FEGG, V. 762; XIX. 77. BULL-HEAD, fish, V. 761; XII. 280 Bull-trout, IX. 616; XII 240—its flesh, IX. 763—its increase in the Tweed,

Bulla, V. 761-genus of mollusks, XV 372, 375-B. vexillum, 1b -fossil, XVII. 111.

Bullæa, genus of mollusks, XV. 372. Bullet, XI. 104 et seg.
BULLETN (Wilham), V. 761.
BULLINGE, V. 762; XVI. 761
BULLAIDUS (Ismael), astronomer, V. 762 -on astronomy, I. 611.

BULLINGER (Heinrich), V 762
BULLION, V. 762, VII 77—how supplied to the mint in former times, ib.—value of, in different countries, IX. 430, 431quantity consumed in the arts, XVIII. 466-annual consumption of, as currency, ib .- additions made to that of Europe since 1851, 474-influence of an increased supply of, on wages and on its own value, 475—Sir Robert Peel chairman of the Bullion Committee, XVII. 362-Ricardo and Bosanquet on, XIX. 153

Bulloa, in India, XXI. 284. Bulmer, printer, XVIII. 539—his printing ink, 545.

Bulnes (General), VI. 553 Bulrush order of plants, V. 214. Bultt, or Bultistan, V 762. Bulwark of a ship, XI. 160. Bulwer (Sir Edward Lytton). See Lytton,

(Sir E. B.)

— (Sir H. L.), Lord Palmerston's instructions to, in reference to Spain,

Bunn, Persian town, V. 762.

BUMPKIN, V. 762. Bunarbashi, village in Asia Minor, XXI.

Bundelas, V. 762, 763

BUNDELCUND, in Hindustan, V. 762. BUNDER-ABBAS, V. 764; X. 709. Bundoolsh (Maha), V. 646 Bunel (Pierre), V. 764. Bungalow, V 764. Bungarus, genus of reptiles, XIX. 64. Bungar, town in Suffolk, V. 764. Buniva (M), his work on insects, IX. 11. Bunker-Hill, in Massachusetts, V. 764: VI. 425—battle of, V 481—monument on, XXI. 796.

Bunsen (Chevalier), on Egyptian deuties VIII. 436, n. 4—on Clemens Alexandrinus, XI. 376 and n. 2, 4-on Egyptian inscriptions, 380, n. 3-on the Egyptian

#### BUN—BUR

language, 412-his criticism on Dr Young, 408-his work entitled Egypt's 431-his kindness to Leopaidi, XIII 338-on Hippolitus and his age, XI 534-on the Gnostic sect Ophites. 688-his intimacy with Mr Hare, XI 227-on the composition of trach yte and dolerite, XV. 132—on the vol-canic rocks of Iceland, 133—his philo-logical speculations, XVII. 534—on the importance of ethnological philology, 542.

Bunsen (Prof), his photometer, X. 429— his theory of the eruption of the boiling springs of Iceland, XII. 201-his galvanic battery, XXI. 617

Bunt, a disease in wheat, V. 171; II 306

Bunter Sandstein, XV 205
Bunting, bird, V 764, XVI. 760—stuff
used for flags, V. 764

BUNTINGFORD, in Hertford, V 764
BUNYAN (John), V. 764—his Pilgrim's Progress an example of well-sustained allegory, II. 588

Bunyon (Mr), on life assurance, XII. 411. BUNZLAU, V. 768

Buonarotti. See Michel Angelo BUOY, V. 768-life-buoy, 1b., XIII. 439, 440

BUPALUS, sculptor, V 768. Buphaga, genus of birds, XVI 762. BUPHONIA, ancient festival, V. 768 Buprestides, family of insects, IX. 104. Buprestis, genus of insects, IX 105 Buquet (Lucien), his contributions to en-

tomology, IX 21 tomology, 12 21
Buratite, mineral, XV 103.
Bursov, fish, V 769, XII 269; III. 95
Burchell on the zebra, XIV. 202.
BURCKHARDT (John Ludwig), V 769-

his account of Arabia, III. 346 et seq his journey through Idumæa, XII. 358 —on manna, XIV 267—Petræa identified by, XVII. 495—on Syria, XX. 901
——on comets, IV 75, 76—on the

tides, XXI. 763.

BURDEN, or Bourdon, in music, V. 769 of a ship, V 769. BURDER (George), V. 769.

BURDETT (Sir Francis), V. 769-his committal to the Tower, 608-his bill in 1825 for the relief of the Catholics, 642 -his motion on that subject in 1828 652.

——— executed at Tyburn, VIII 692 Burdin (M), prize offered by, to those who could read while in mesmeric sleep without the use of the eyes, &c, XX. 429, 430-no candidate for, 430.

Burdon (Rowland), his iron bridge at Sunderland, III 414

BURDWAN, in Hindustan, V. 770; IV. 651 -coal of, XI 457. Bure, (G. F de), his work on bibliography

IV 713. river in Norfolk, XVI. 289, XXI.

Buren (Martin Van), XXI 441. Burford, in Oxfordshire, V. 770. Burg, town in Prussian Saxony, V. 770. BURGAGE, a form of tenure, V. 770: XV.

BURGER (Gottfried Augustus), V. 770, XIX. 718

Burgersdiorus, or Burgersdyk (Francis), V 771; XV. 539—allusion to, in the Dunciad, ib, n 2—contents of his Institutiones Metaphysicæ, XIV. 604, n 2
—on syllogisms, XIII 611, n.
Burgess, V. 772—burgesses in Sweden,
XX. 865—burgesses returned to the

House of Commons by University of Oxford, XXI 456-House of, in Vuoinia, 747, 748

- (DANIEL), V. 772. (Right Rev. THOMAS), bishop of Salisbury, V. 772. BURGGRAVE, V 772.

Burgh, or Dun, VIII. 244. royal, in Scotland, V. 54 - police, XVIII 203.

in Suffolk, Roman castle at, XX.

#### BUR-BUR

BURGHBOTE, V 772. BURGHBRECH, V 772.

Burghers, XVIII. 499 - their reunion with the Antibuighers, 500 BURGHMOTE, V 772

BURGEMAIR (Hans, or John), V. 772. BURGLARY, V 772

Burgo (Lucas de), author of the first printed book on algebra, II 484; X.

- (Sir Richard de), on the value of the Insh salmon fisheries, IX. 622 BURGOMASTER, V. 772.

Burgon (Mr), on numismatics, XVI. 354 et sea

BURGONET, ancient helmet, V. 772 Burgos, in Spain, V 772—Wellington's attacks on, 612, receives a check at, XXI 825.

Burgoyne (General), V 466, 476-his disaster at Saratoga, 483; XXI 751— -favourable result of enquiry into his conduct in America, 487—his opinion against the continuance of the American war, 497

- (Sir John), on blasting rocks. IV. 755

BURGUNDIONES, V 773 BURGUNDIUS (Nicholas), V. 773. BURGUNDY, V 773; X. 277—wines of,

XXI. 883-canal of, X. 244. - House of, Portuguese dynasty,

XVIII 392. - (Dukes of), X. 26 et seq. ; XL 561, XX 884

BURHAMPOOR, town in Hindustan, V 773. BURHILL, or Buighill (Robert), V. 773. Buri (Cassandra), VIII 571

BURIAL, V. 778—proportion of burials in England to the population, VIII 755 registration of, XVIII. 831—burying places, VI 22, XIV. 444, XIX 619—burying alive, VI 22—ceremonies connected with, X. 348.

BURIATS, tribe of Tartars, V. 774.

Buridan (Jean), V 774. Buridan (Jean Levesque de), V. 774 BURIN, an engraving instrument, V 774. BURKE (Edmund), V. 774—his patronage

of Barry, IV 476, and of Crabbe, VII 474—his theory of beauty, IV. 538— on the partition of Poland, 392—his plan for introducing public economy, V 489; XI. 773—speech against the American war, V. 497—attack on Sir Elijah Impey, 514—his pioceedings against Warren Hastings, 520-oration of five days against Mi Hastings, 529on the French Revolution, 535-his treatise against the French Revolution, 537, XIII 785—Dr Brocklesby's kindness to, V. 674—on the corporation and test acts, 536-on the Canada bill, 537 -his quariel with Mr Fox, ib.-his intimacy with Mr Fox, IX. 851-his corn-act of 1773, VII 880-on the limits of legislation, XIII. 267-on the expense of elections, VIII 770—on Law's Mississippi scheme, XIII. 295 his character of Sir Joshua Reynolds, XIX. 102 - on Rousseau, 449 - his opinion of Dr Thomas Young, XXI

963 See Pitt, Fox. BURKITT (Wilham), V. 778
BURLEIGH, V. 778. See Cecil.
Burlers, XXI 914, n. 2, 913. See Bur-

hng. BURLESQUE, V. 778

Builing, in woollen manufacture, XXI 922

BURLINGTON, V. 778, 365.

- in the state of Vermont, V. 778 n New Jersey, V. 778.

in the state of Iowa, V. 778.

(Earl of), his ments as an architect, III. 455.

BURMAH, V. 778; III. 785-chmate of, 787 - war with the East India Company in 1824, V 646; XL 508-river system of, XVII 607-wars with Pegu, 367—language of, XIII. 206—empire of, XV. 412—weights and measures of, XXL 810.

### BUR—BUR

BURMAN (Caspar), V. 785.

(Francis), biblical critic, V. 785 (Francis), theologian, V 785 (John), physician, V. 785

(Peter), philologer, V. 785—h.s edition of Buchanan's works, 720; of Petronius, XVII. 501.

Burmanniaceæ, nat order of plants, V

Burmeister (H), his entomological works. IX. 20-on the cirripeds, XV 319 Burn (Colonel), his tables of ranges for ordnance, XI. 146, 148, 149.

(Dr), extract from his Justice of

the Peace, VII 377, n

Burners (Gas), X. 424-ventilation of,

Burnes (Dr), on the diseases of Cutch, VII. 597, 598.

- (Sir A.), murdered by the Afghans, V. 667; II. 208—on Bukhara, V. 759, 760.

BURNET (Thomas), V. 790-on the Deluge, VII. 719

 (GILBERT), bishop of Salisbury, V. 791 — on Buchanan's History, 720 — his characters of Lord Stair, VII. 682; of John and William Forbes, IX. 776, 777-his Life of Bishop Leighton, XIII. 323, 324-on the Earl of Rochester, XXI 873.

- (James), Lord Monboddo, V. 793 on the origin of language, IL 605, XIII 186.

- forage plant, IL 329

Burnett (Sir William), his method of preserving timber, V. 173; VI 491; XX 167; XXI. 279.

- (C. J), his photographic processes, XVII 551.

 (Mr), on Turner's style of painting, XXI, 388, 389, (M1), on the exhalation of car-

bonic acid by plants, V 105 BURNEY (Charles), doctor of music, V 793

-on Chinese music, VI. 581. - (CHARLES), historian of music, V -his MSS in the Butish Museum, XIII. 392 - on the Alabian musical

scale, XV 708—on Handel, XI 207—— (Frances), novelist, V. 795—cha racter of her novels, XIX 279.

BURNING, V. 795—of the dead, ib—burning fountains, X. 409—death from, XIV 431—crime of Sec Arson.
BURNING-GLASSES, VI. 1; XI. 275—of Ar-

chimedes, III. 430. BURNISHER, VI. 16-engraver's, VIII. 802,

Burnishing, ın gıldıng, X. 625.

BURNLEY, town in Lancashire, VI. 16. Burnouf (Eugène), on the Zend language, XVII. 529-on cuneiform inscriptions.

BURNS (Robert), VI. 16—Currie's life of, VII. 595—poetry of, XVIII 125—Lock-hart's life of, XIII. 548—has lines on Smelle, XX. 337—his estimate of Smith's Wealth of Nations, 341, z. 1 festival at Ayr in honour of, XXI 878 -Prof. Wilson on the effects of his poetry, 1b

- (Allan), on the fascia of the neck and chest, II. 824.

Burnt-clay, as a manure, II. 304—in mortar, XX. 714.

BURNTISLAND, in Fifeshire, VI. 20-ferry. IX. 796

Burra-burra copper mine, IV. 295; XV 238-malachite found in, XVII 621. Burrard (Sir Harry), XXL 821

Burren Sunker, Hindu race, XL 471; VI. 219

Burrey, one of the Orkney islands, XVI

Burrough (Stephen), his voyage of dis-

487

Burrowing serpents, XIX. 55. Burrows (Dr), on the amount of fluids in the cranium, XVII. 698.

#### BUR-BUT

Bursa, in veterinary science, XXI. 558diseased, ib BURSAR, VI. 21.

Bursaria, genus of animalcules, III 201 Buisaries connected with Glasgow College, X. 652; XXI 478—in University of St Andrews, 475—Marischal College, Aberdeen, 481. See Universities. BURSE, VI. 21.

BURSLEM, town in Staffordshire, VI 21potteries at, XVIII 433, XXI. 797. BURTON (John, D D), VI. 21

(J. H), on the judicature of Scotland, XIX. 811

(Lieut), his account of Mecca, XIV 378, 379—his pilgrimage to El Medinah and Mecca, XV 305—his discovery of Lake Tanganyıka, XXI 17

---- (ROBERT), VI 21—the first Eng-lish author that mentions coffee, VIL

 ale, V 332. BURTON-UPON-TRENT, VI 21; XX. 531-

water of, XIX. 616-ale and beer, XX. 530. Burton's Lafe of Hume, XII. 2 et seq, 6,

BURTSCHEID, town in Prussia, VI 22 Burullus (cl), Egyptian lake, VIII. 429. BURY, VI 22.

(Richard de), VI 22. See Aungervyle - ST EDMUNDS, VI. 22; XX. 790, 791.

BURYING ALIVE, VI. 22.
——— (place), VI 22

of gold and silver, XVIII 467, 471 Busaco, a convent in Portugal, VI 22— battle of, ib; V 608; XXI 823. Busbecq (Augier, Ghislen de), VI 22.

Bushy (Di Richard), VI 23 Busca, town in Piedmont, VI 23 Buschetto, Greek architect, XVII 60, 716. Busching (Anthony Frederick), VI 28. Bush (Paul), first bishop of Bristol, VI

shrubby plant, V 78
BUSHEL, VI 24—standard, XXI 804number in a boll, 809 - Winchester bushel, 807.

BUSHIRE, or Abuschehr, town in Persia -taken by the British in 1856, XVII 443-trade of, 444 Bushmen of Africa, II 223, V. 58

Bushnell's submarine machine for blowing

up vessels, VIII 59. Businis, town in Egypt, VI. 24; VIII.

Egyptian deity, VI 24, Buskin, VI 24; VII 426, VIII, 135, 137 Buss, VI 24-a small ship, ib. Bussora, Asiatic city, VI. 24; IV 364-its commerce, XI. 460. Bussy (M.), XI. 483, 485.

Bust, VI 25—in numismatics, XVI. 358. Bustamante, XIV, 712

Bustamite, mineral, XV. 82. Bustamb, bird, VI 25; IX, 763; XVI

797—shooting of, XX. 223. BUSTUARII, gladiators, VI 25.

BUSTUM, VI. 25.
BUTCHER, VI. 25—erroneously supposed to be excluded from juries, XIII. 24 number of butchers in London, 660;

in Scotland, XIX. 804.
BUTCHER-BIRD, VI. 25; XVI 748.
Butcher's meat, in Paris, X. 266.

broom, plant, V 113.

BUTE (John Stuart), earl of, VI. 25—
his resignation as first Lord of the

Treasury, V. 467.
—— ship canal at Cardiff, VI 232. Buteo, genus of birds, XVI. 744. BUTESHIRE, VI 25—agricultural statistics XIX. 796, 797, 798—population, 799, Buthus, genus of arachnides, III. 385.

Butirinus, genus of fishes, XII. 250. BUTLER, VL 28.

family in Ireland, XII. 473.

(CHARLES), VI. 28. (JAMES), Duke of Ormond, VI. 28. (Joseff), bishop of Durham, VI.
 on personal identity, I. 217—notice of his life, 859—his Analogy, ib.; IL

## BUT—BYR

745; VI. 32-his ethical principles and Discourses, I 359, 363-his style, 363on self-love, 296-remarks on Mackintosh's account of his views on the moral sense, 298, 299 - coincidence of some of his views with Aristotle's, IIL 565, n. 7-on anger, 141-on civil government, 566-compared with Jonathan Edwards, VIII. 417-on virtue, XIV. 623 -his theory on the foundation of moral distinctions, XV. 544, 556-his sermons revised by Secker, XX. 30.

BUTLER (Samuel), author of Hudibias, VI 34—poetry of, XVIII 123—examples of from Hudibras, XXI, 894, 895 Wycherley's attempt to benefit him. 942.

Buto, Egyptian deity, XI 384 Butomaceæ, nat order of plants, V 214 Butning, town in Albania, VI. 35 Butt, wine-measure, VI 35

BUTTER, VI 35, 510, XV 10, 11-mode of making, VII 623-average yearly product per cow, 624—buttet-darres, 622—whey butter, 526—Irish, XII, 518 —Dutch, XI 582, 585—quantity exported from Holland, 585-specific gravity of, XII 88.

chemical preparation once so called, VI 35.

- (Nathaniel), early newspapers by, XVI. 181.

Butterby, near Durham, salt spings at, VIII 266

Buttercup order of plants, V. 180. Butterfly, VI 35, IX. 206 et seq -- vast flights of, in Ceylon, VI, 395. —— weed, V. 199.

BUTTERIS, VI 35. Butterley iron-works, Derbyshire, hot-blast at, XII 548—steam-boiler, XX.

BUTTERMILK, VI 35, VII 622. BUTTER-TRDE, VI 35 Butterwort, V 203. BUTTEVANT, town in Cork, VI 35 Buttmann on philology, XVII 533. BUTTON, VI 35.

- (Sir Thomas), exploratory voyages of XVIII 168

BUTTRESS, VI 35 - in pointed architectuic, III. 489, 508—flying, VI. 35—in walls, VII 325, 326—supporting roofs, XIX 391

Butts, in archery, III 425, 426.

leather, XIII. 305, 306, Butyric acid, IX 758.

Butzow, German city, VI. 35
Buxar, town in Hindustan, VI 35—bat tle of, XVII 20

DUNTON, VI 36—springs, VII. 755
— (JEDEDIAID), a celebrated mental calculator, VI 36

- (Sir Thomas F), on prison diet, VIII. 22-on the condition of English prisons, XVIII. 568 - on the slavetrade, XX 323.

Buxtorf (John), senior, VI. 36—his Hebrew Bible, IV. 697—his Concordance, VII. 228-his Lexicon to the Talmud, XXI. 16.

- (John), junior, VI. 36-his controversy with Capellus, 206 BUYING, VI 36—buying the refusal, ib. BUZOT, Spanish town, VI. 36 Buzzi (Mons), on albinos, II. 448 Buzzard, bud, VI 36; XVI 744 Byazid II. of Turkey, XXI 379. Bylot, northern navigator, XVIII 168 BYNG (George), Lord Viscount Torrington

VI. 36 - his capture of the Spanish flect, V. 455. - (the Hon. John), admiral, VI. 37

-his alleged misconduct at Minorca, and execution, V. 463. BYNKERSHOEK (Cornelius Van), Dutch jurist, VI. 37.

Byles for a cheese-dairy farm, VII. 624 Byrge (Juste), on logarithms, XIII. 553. BYROM (John), poet, VL 37 BYROM (Lord George Gordon), VL 37

on the advantages of believers in the gospel, XII. 5—his Manired, VIII. 168

# BYR-CAB

-criticisms on his works in the Edinburgh Review, XII 717—the fascinating features of his Don Juan, XX. 871his notice of the poet Rogers, XIX. 247 -his aid to the Greeks, and death at Messalonghi, XI 28—his opinion of Colman, VII. 132-Moore's life of, XV. 532 -his poetry, XVIII 92, 95, 126-his acquaintance with Shelley, XX. 101,

Byron (Loid), his duel with Mr Chaworth, VIII. 232.

- (Hon John), admiral and curcumnavigator, VI. 42, V 470, 484—his visit to the Ladrone Islands, XVIII.

Byrrhu, tribe of insects, IX 115 Byrrhus, genus of insects, IX. 115 Byrsa, VI 180—its submission to the Romans, 303

Byssacanthus, genus of fossil fishes, XVII 117.

Byssolite, mineral, XV 81.
Byssus, VI. 42—filaments of Pinna, XV.

Bythites, genus of fishes, XII. 270. Bytown, in Canada, VI. 144. Bytownite, mineral, XV. 73. Byttneriaceæ, nat order of plants, V 184

Byturus, genus of insects, IX 114
BYZANTINE HISTORIANS, VI 42; XI 548
— empine, coins of, XVI. 385
BYZANTINI, VI 43, VII. 302—philology at, XVII. 520.

Bzovius (Abiaham), VI. 43.

C, letter of the alphabet, VI. 44-in abbre-

viations, IL 18. CAABA, Or KAABA, VI 44; XIV 378black stone in, probably an aerolite, I 459.

Cab, a Hebrew measure, VI. 44 Cabat, VI 44—name of a ministry, ib., V 425

VAESURALLARIA, VI. 44.
CABALLINE, VI. 44.
CABANIS (Pierie Jean George), VI 44.
CABAGE, VI. 45—cultule of, II 321;
XI. 787—as food, IX. 760—turnip rooted, XI. 737 - order of plants, V. 182.

Cabbage-rose, V 191.

CABBALISTS, VI 45. CABENDA, town in Western Africa, VI.

Cabet (M), his attempts to form a communistic settlement in America, VII 208

Cabetes, V 280 CABEZA DEL BUEY, Spanish town, VI. 46. CABIN, VI 46

CABINET, VI. 46-as used in modern politics, ib .- of the United States, XXI 429

Cabinet-making, XII. 805 Cashra, deitaes of antiquity, VI 46—mysteries of, XV. 753; celebrated in Samos, XIX. 593.

Cabiria, festivals in honour of the Cabiri, VI 46.

CABLE, VI 46-sheet-anchor cable, ib.stream-cable, ib—chain, XX. 22—expediency of testing, XIV. 290—cables made of esparto, IX. 333.

Cabling, in architecture, III. 508. Cabombacea, nat. order of plants, V. 181. Cabor (Sebastian), VI. 47; XVIII. 163 his discovery of Prince Edward's Island, 518; of Florida, IX 666; Newfoundland and Labrador, VII 158, VI 158—his expedition to La Plata, XVII

779. (John), IL 699; VL 47, 158; XVI 172, XVIII. 168.

Cabra, Spanish town, VI. 48. Cabral (Alvarez), II. 699; X. 393, 472-his discovery of Brazil, V. 279. CABRERA, islet in the Mediterranean, VI.

# CAB—CÆ

Cabrera (General), XX. 480, 481, 483. Cabut, in Afghanistan, VI. 48—climate of, II. 203—its trade, 206—retreat of the British from, V. 668—taken by General Pollock in 1842, II. 209. CACAO, or Cocoa, VI. 49. See Cocoa-tree, V 185.

Caccini, musician, XXI. 287. Caccres, in Spain, VI. 49; IX. 339 Cachalot, the sperm-whale, VI. 49, XIV. 231-dentition of, XVL 444-oil from, 493

CACHAO, VI. 49 Cachar, in Bengal, IV 651 Cachias, in Brazil, XIV. 294. Cacholong, variety of calcedony, VI. 49,

XV. 69. CACHUNDE, a medicine, VI. 49.

CACOPHONY, VI 49

Cactaceæ, nat order of plants, V 194— region of, 228; XVII. 628 Cacrus, genus of plants, VI. 49; V. 194 culture of, XL 757.

CACUS, VI. 49. CADARI, VI. 49

Cadastre, a survey of France, X. 276. Cade (Jack), his insurrection, VIII 689 Cadell (W. A.), on fertilising land by warping, IL 364

Cader-Idris, mountain in Wales, XIV. 543. CADET, VI. 49-naval, XVI. 105.

and Brisson's experiments with a burning-glass, and discovery of achromatic fluid object-glasses, VI. 14, and n. 2.

CADI, VI 49; VIII. 445. CADILESCHFR, VI. 49. CADIZ, VI. 49, 50—Drake's expedition to,

VIII 712-taken by the British in 1596, 713—their attempt upon it in 1702, V 447—taken by the French, in 1828, X. 186—wine exported from, XX 490— wines of, XXL 884—effect of the vine disease at, 1b

CADIZADELITES, Mahommedan sect, VI. 51

51
CADMEAN LETTERS, VI. 51.
CADMIUM, VI. 51, 492; XV. 66
CADMUS, VI. 51—letters introduced into Greece by, II. 617; XI. 599—Thebes founded by, XXI. 176
—— of Miletus, VI. 51
Cadolimi (Aloys), his work on insects, IX. 17

Cadoudal (Georges), X. 129

CADRITES, VI. 51. CADUCEUS, VI. 51; XIV 541. CADUS, VI. 51 Cadusti, VI 51.

Cacilida and Cacilia, family and genus of reptiles, XIX. 40. Cælian hill, in Rome, XIX. 296, 856.

CERLUS (Aurelianus), VI 51.

CAEN, in France, VI 52—population, X.
277—building stone of, XX 712. Canurus, genus of entozoa, XXI. 978. CERE, Etrurian city, VI. 52

CAERLEON, in Monmouthshire, VI. 52. CAERMARTHEN, shire and town, VI. 52, 53;

CAERNARYON, VI. 54, VIII. 754—em-bankments in the county of, 644, 647. CAERPHILLY, in Glamorgan, VI 55. CAERSWS, in Montgomeryshire, VI. 55. CAERWENT, town in Monmouthshire, VI.

Caerwys, in Flintshire, VI. 55. Cæsalpiniæ, sub-order of plants, V. 190. CESALPINUS (Andreas), VI. 56; XIV. 461 -his anatomical discoveries, IL 761. Cæsar (C. Julius), VI. 57; XIX. 828 et

seq.-his triumph over the Roman nobility, I. 321—his invasion of Britain, V. 376; XIX. 741—his reform of the calendar, VI. 77-Clarke's edition of his Commentaries, 757—his treatment of Cicero, 718, 719—his expedition to Egypt, VIII. 471—his pursuit of Cato, 339—his accounts of the Druids, 184, 185, 188; XI. 599—his defeat of Juba at Thapsus, XIII. 13-sculpture encou-

# CÆ-CAL

raged by, XIX. 858—his account of the Caledoman tribes, 742—his account of the vessels used in the invasion of Britain, XX. 118, and of those of the Gaulish Veneti, ib —in Spain, 458—Helvetil defeated by, 883—death of, XIX.

Cæsar, title of, VI 57.

(Sir Julius), VI 58, 764.

(Julius), surgeon, XIV. 2. CESAREA, two towns in Palestine, VI 58 CESAREAN OPERATION, VI 58; XX. 817. Cesio, genus of fishes, XIL 288. CESSIO, gents of fishes, A CESONES, VI 58. CESTUS, VI 58, 390. CESURA, VI 58. CETERIS PARIBUS, VI 58. CAFFEINE, VI. 58, 519; V. 196; VII 54. CAFFILA, VI 58. CAFFRARIA, VI. 58. See Kafraria. CAFFRES, or Kaffres, VI. 58; II 222; IX. 351; X. 712; XIII. 32 et seq —language of, 219, 225, 226. CAFTAN, VI 58. CAGANUS, or Cacanus, VI 58. CAGE, VI. 58—in coal mining, VII 126. CAGLI, Italian town, VI 58. CAGLIARI, in Sardinia, VI 58; XIX. 640 (Paolo), painter, VI. 59. See Paolo Veronese. CAGLIOSTRO (Alessandro), count, modern impostor, VI 59. Cagniard de la Tour, his Sirène, I. 892 CAHER, or Cahir, in Tipperary, VI 59; XXI. 288.

Cahokia, in Illinois, XII 363. CAHORS, French town, VI 60, XIII 696. CATAPHAS, Jewish high-priest, VI 60 CATLLE (Nicolas Louis de la), VI. 60, XIII. 141—his astronomical labours, III 805 -his measurement of an arc of meridian, I. 774; IX. 550-on the diminution of the obliquity of the ecliptic, IV.

13—his catalogue of stars, 80, 95—his micrometer, XIV 758.

Cailleau on anonymous books, IV 712his Bibliographical Dictionary, 714. Caillie, African traveller, II 210 CAIMACAN, VI 60

Cars, son of Adam and Eve, VI. 60; IL. 24; III. 267.

Caing whale, XIV. 227 CAINITES, sect of heretics, VI 60 Caird (James), on chalking land, II 303his account of Lawes' experiments, 309 -his estimate of the average yield of wheat in England, 310-on the sainfoin crops of Berkshire, 329-estimate

of the extent of land in England under crop and fallow, VIII. 728—his farming at Baldoon, XXI. 864 Cairina, genus of birds, XVL 817.

CAIRN, VI. 61; IV. 473 CAIRNGORM, mountain, VI. 61; II. 32beryls of, IV. 683.

variety of rock-crystal, VI. 61; II. 32; XV. 69.

Carro, VI. 61; II. 224; VIII. 477, 498, 499—captured by the British in 1801, V. 584—bombarded by Khursheed, VIII. 491.

VIII. 491.

Caisse d'escompte, X. 39.

Carsson, VI. 62—caissons used in laying the foundations of bridges, XX. 722

Caistor, in Lincolnshire, VI. 62.

Catterness, VI. 62—fisheries, IX. 635, 639

-fossils of, XVII. 124-geology, XIX. 798—scenery, 794—agricultural statistics, 796, 797, 798—population, 799.

tics, 786, 797, 798—population, 799.
CAIUS, or Kaye (Dr John), founder of Caius College, Cambridge, VI. 68;
XIV. 460; XXI. 465—has treatise on British dogs, XI. 763.

— Institutes of, VI. 741, 744, 745.
CAJAZZO, Neapolitan city, VI. 63.
CAJETAN (Cardinal), VI. 63; V 192.
CAJETAN (Cardinal), VI. 63; XIII. 725.
Caju-apple oil, XVI. 496.
CAES, VI. 63—for cattle, II. 345, 419.
CARCAUGHER. II. 983. Cake-crusher, II. 283. Caking coal, VII. 118. Catabar, Old, African river, VI 63.

# CAL-CAL

CALABAR, New, a branch of the Quorra,

heen W. 190 CALABASH, VI. 63,

- tree order of plants, V. 200 Calabozzo, in South America, temperatme at, IL 673.

CALABRIA, VI. 63; XX. 237, 255-British expedition to, in 1806, V 602-Dolomeu on an earthquake m, VIII 95—chmate of, XII. 639; XX. 247—earthquakes in, XVII. 616

CALABRITTO, Italian city, VI 64 CALAHORRA, Spanish town, VI. 64 CALAIS, VI. 64 — tournament at, 618

taken by the English, VIII. 683—re-covered by the French, 710—staple for

Calamanco, VI. 65. Calamana, genus of serpents, XIX. 55 Calamanes, mollusks, XV. 399, 400—fossıl, XVII. 114.

CALAMIANES, islands, VI. 65. CALAMINE, VI 65; XV. 100, 246-mines of, in Derbyshire, VII. 754-m Bel-

grum, IV. 624 — pyro-electricity of, VIII. 561—used in making brass, V. 277—electric, XV. 100—accidental discovery of, in Cornwall, XXI 321. CALAMIS, Greek sculptor, VL 65.

CALAMISTRUM, VI. 65.
Calamite, mineral, XV 81.
CALAMITES, fossils, VI 65; V. 235, 236.

Calamity, erroneously regarded as a proof of divine displeasure, I 473, 479. CALAMUS, VI 65

Calandra, genus of insects, IX 140 Calandrini, the first improves of the Newtonian theory of the moon, I 779. CALANUS, VI. 66.

Calaos, binds, XVI. 773.

Calappa, genus of crustacea, VII. 541 Calas (Jean), VI. 66—his family assisted by Voltaire, XXI. 661.

Calash, VI 66
Calasio (Mario de), VI 66—his Concordance of the Bible, VII. 228. CALASIRIS, VI. 66.

CALATAFIAI, city in Sicily, VI 66 CALATAGIRONE, town in Sicily, VI 66 CALATAYUD, Spanish town, VI 66. CALATHUS, VI. 66-genus of insects, IX.

91. CALATRAVA, VI. 66-knights of, 1b; II

CALAURIA, island, VI. 67—amphictyony of, II. 729.

Calcagni (Dr Francesco), on the mortality at Palermo, XV. 625

Calcarbous spar, VI 67; XV. 91— colours in, XVI. 540—optical properties of, 659; I. 913-dichroism, XVI 666its crystallisation, VIL 552 et seq.; VI 445—discovery of polarization by, L 902

ball, a disease in cattle, XXI. 568 rocks, origin of, XVII. 619 — their use as building materials, ib.; XX.

Soils, V. 98—plants of, 221. CALCEARIUM, VI. 67. CALCEDONY, VI 67; XV. 69; IL 231 Calceola, fossil mollusk, XVII. 104 CALCEOLARIA, genus of plants, VI. region of, V. 228; XVII. 629.

CALCEUS, Roman shoe or boot, VI. 68; XX. 208

Calchas, VI. 68 Calchedon, VI. 401. CALCINATION, VI. 68 - of iron ores, XII.

545, 574—of brass, V. 277.
Calcrom, VI. 68, 487—oxides of, in the earth's crust, XVII. 619. Calcott, painter, XXI. 388. See Callcott, (Sir Augustus).

CALC-SINTER, VI. 68. Calc-spar, XV 91. See Calcareous Spar. CALC-TUFF, VI. 68.

# CAL-CAL

Calculating machines, I. 880, 881. Calculation, Greek mode of, IL 5; III. 577 — Roman, II 6—of interest, XII 432—of new and full moon, and eclipses, IV 120.

CALCULI, VI 68.

—— (urinary), VI. 68, XVII. 691— cure of calculous diseases, XX. 830—in the domestic animals, XXI. 570 See Lithotomy, Lithotrity. Calculus, VI. 68.

— in mathematics, VI. 68 — James Bernoulh on the, IV 672, see Fluxions, and Geometry (New)—differential and integral, VI. 68—of partial differences, the—of variations, ib , IX 675—of exponentials, VL 68—of functions, ib—of finite differences, 69—of derivations, ib -of probabilities, ib -of sines, ib -

of operations, I 807—Minervæ, VI. 69 CALCUTTA, VI. 69; XXI. 399—cotton-mill at, VII 439—population of, IV 651— Black Hole of, XI 484.

CALDANI (L. Marco Antonio), VI 71. CALDARIUM, VI 71. CALDER, Yorkshire river, VI 71; XXI.

957, 680.

Calderari, Italian political society, XII. CALDERINUS (Domitius), critic, VI 71.

CALDERON DE LA BARCA (Don Pedro), VI. 71, VIII. 146, XVIII 114. Calder-pipes for blast-heating, XII 548.

CALDERWOOD (David), VI. 72 - (Col), on a base for the trigonometrical survey, XXI. 330 Caldew, river, VII. 576.

CALDRON, or Cauldron, VI. 78. CALDWALL (Richard), VI. 78. CALEDONIA, VI. 78.

- (New), island, VI 74, IV. 266. CALEDONIAN CANAL, VI. 74; XVI. 55; XIX. 807—Telford engineer to, XXI. 145.

Caledonians, VI 78, 74; XIX. 741, 742 Agricola's wars with the, V 379; XIX. 741-Severus' campaign against, 341. Caledonii, VI. 74.

Caledonite, mineral, XV 105 CALELLA, Spanish town, VI. 74. CALENBERG, in Hanover, VI. 74. CALENDAR, VI. 75 — Gregorian, 82, 85-

reformation of the, 82—ecclesnastical, 79—Mexican, II. 684—Hindu, VI 353—Druidical, VIII 186—Egyptian, 449, 450-French revolutionary, X. 84dener's, XL 758-why not reformed in Russia, XIX. 528—errors from confounding civil and ecclesiastical years, XVIII 320, n. See Chronology, Day,

Month, Year. CALENDER, VI. 89; IV. 767—calendering of cotton cloth, ib.

Calenders, Mahomedan friars, VI. 98; IX 472. Calends, or Kalends, XIII. 40; VI. 76.

CALENTURE, VI 93 CALENZIO (Elisco), VI. 93.

CALEPINO (Ambrogio), VI 93. CALE, VI 98—treatment of calves, II 344; in Essex, IX 337-skins for leather, XIII. 305-subject to costiveness, XXI 565

GOLDEN), VI 93 CALL, town in New Granada, VI 93. CALLAN, town in Hindustan, VI 93 Caliban, character of, XX. 88 and n. 2. CALIBER, or calibre, VI. 93-compasses

ib.—rule, 94.
Carroo, VI. 94.— manufacture of, in
Bengal, IV. 650—once made of linen warp and cotton weft, VII. 441-cotton calicoes, 449—as used in hat-making, XI 242—manufacture of, in India, 458,

459—in Derbyshire, VII 755.
CALICO-PRINTING, VI 94; VIII 314;
XVIII 520—first introduced at Pollockshaws, X. 648.

CALICUT, in Hindustan, VI 94. CALIDASA, Indian poet, VI. 94.

CALIFORNIA, VI. 94.
—— (UPFER), VI. 95; XXI. 419—Gold region of, II. 706; VI. 97, XV. 232—

# CAL—CAL

supplies of gold from, XVIII. 463-rate of wages in, 466, 467—persons engaged in digging gold, and their average gains, XV. 421-climate of, II. 672probable descent of the natives of, 695 -cinnabar found in, XV. 238-tribes of Indians in, IX. 347—ceded to the United States, XIV 714; XXI. 442-mercury found in XVII 622—gigantic trees of, 626—pine-trees of, 757, 760—wines of, XXI 888—debt of, 428—slavery prohibited in, ib

CALIGATI, VI 101.

CALIGULA, Roman emperor, VI 101— reign of, XIX. 335—his landing in Britain, V. 377—his persecution of the Jews, XII. 772-his jealousy of Seneca, XX. 45

Caligus curtus, VII. 543 CALIPH, VI 101-Spain under the caliphs, XX, 466,

CALIPHATE, VI 101: XV. 412. CALIPPIC PERIOD, VI 101, 79. CALIPPUS, astronomer of Cyzicus, VI 101,

79-his astronomy, III. 789-his correction of the Metonic cycle, VI 79. CALISTHENICS, VI. 101

CALITRI, Italian town, VI. 101. CALIXTINES, VI 101. CALIXTUS, three popes so named, VI. 101.

- (GEORGIUS), VI 101. Calking, in shoeing horses, XXI 560
Callan, town in Kilkenny, VL 101; XIII

CALLANDER, in Perthshire, VI 102; XVII. 459.

Callanish, druidical temple, XIII, 351. Callan's (Rev. Mr) powerful electro-magnet, XXI. 641

Callao, in Peru, VI. 102, XVII 474.

or Campello, island, VI. 102. Callavayas, Peruvian Indians, IV. 829. CALLCOTT (John Wall), VI 102. Callet's work on logarithms, XIII 555. Callianiridæ, zoophytes, XXI. 1001. Callicera, genus of insects, IX 238 Callichroma, genus of insects, IX 144 Callichthys, genus of fishes, XII. 262, 259,

CALLICRATES, Sculptor, VI, 102. Callidium, genus of insects, IX. 145. Calligraphus, VI 102
Callimachus, Greek poet, VI 102—his
quarrel with Apollonius the Rhodian,

III. 303

- architect, VI. 102. Callimorpha, genus of insects, IX. 214. Calling, in theology, XXI. 218. CALLINGAPATAM, in Hindustan, VI 102 CALLINGER, fortress in Hindustan, VI. 102; V. 764. Callington, town in Cornwall, VI. 103.

CALLINO, town in Italy, VI. 103. CALLINUS, Greek poet, VI. 103 Calliodon, genus of fishes, XII 223. Callionymus, genus of fishes, XII 306, 307. Calhopea, genus of mollusks, XV 370. CALLIOPE, VI 103; XV. 699.

planet, IV. 91. CALLIPAEDIA, VI 103. Callipe (M.), on iron bridges, XII 577. Callipers, VI. 93—used in turning, XXI.

CALLIPHON, Epicurean philosopher, VI.

103 Callipteryx, genus of fossil fishes, XII.

Callirhipis, genus of insects, IX. 106. Callierroe, fountain near Athens, VI. 103; IV. 170

in Mesopotamia, VIII. 389. CALLISTEIA, Lesbian festival, VI. 108. CALLISTEIA, LESORRI TESTIVA, VI. CALLISTENES, VI. 103; III. 584. CALLISTO, VI. 108.

CALLISTRATUS, Athenian orator, VI. 103. — Athenian poet, VI. 103. Callithrix, in zoology, XIV. 140.

Callitrichacese, nat. order of plants, V.

#### CAL—CAL

Callomyia, genus of insects, IX. 242 Callon, Greek sculptor, VI. 103, XIX. 854.

- (M), on turbine wheels, XII. 171 Callorhynchus, genus of fishes, XII 319 CALLOSA DE ENSARRIA, Spanish town, VI. 103.

- DE SEGURA, VI. 103 CALLOT (Jacques), engraver, VI 103. Callow (Mr), on growing mushrooms, XL 736.

CALLY (Pierre), VI 104

Callyodon, genus of fishes, XIL 266, 268
CALM LATITUDES, VI 104—advantages of steam-vessels in a calm, XX 21. CALMAR, or Kalmar, in Sweden, VL 104

-union of, VII 739 CALMET (Augustine), VI 104. Calmuc skull, III, 29

Calne, town and river in Wiltshire, VI 104; XXI. 879

Calobata, genus of insects, IX. 253 CALOGERI, or Caloyers, monks, VI 104. CALOMEL, VI 105, 498, XV. 107 Calonne (Mons de), X. 40 et seq Calophysus, genus of fishes, XII. 262. Caloptrophorus, genus of birds, XVI 805 Calopus, genus of insects, IX. 133 Calore, river, XX. 238.

CALORIC, VI 105; XI. 260. See Chemıstry.

CALORIMETER, VL 105; XL 273, L 820, 932; XXI 220

CALORIMOTOR, VI. 105-Dr Hare's, XXI. 616.

Calosoma, genus of insects, IX. 98 Calostomena, genus of fossil fishes, XII

Calotes, genus of reptiles, XIX. 32

CALOTTE, VI 105, 205.
CALOTYPE, VI. 105, I 923; XVII 545—
analogy between it and daguerrotype, T 923.

CALOVIUS (Abraham), VI. 105 CALPE, VI 105.

CALPURNIUS (Titus), VI 105.

- (Flamma), Roman army rescued by, VI 288. CALTANISETTA, in Sicily, VI 105; XX.

CALTROP, VI. 105

CALTURA, in Ceylon, VL 105. CALTUREA, tonic root, VI. 105; V. 181 CALUMET, VI. 105.

CALUMNY, VI 105-oath of, ib

CALVADOS, in France, VI. 105—lace-mak-ing in, XIII 142. CALVART (Denis), VI. 106.

CALVARY, VI. 106; XII. 737-in heraldry, VI. 106.

Calvely (Sir Hugh), XIII 111. Calver (E. K.), on tidal rivers, XVI 77. Calvert (Prof. F. Crace), part of the article Dyeing in this work written by, VIII. 272-his method of purifying coke, X. 320.

- (Mr), his theory as to the site of Troy, XXI. 357.

(GEORGE), Lord Baltimore, VL 106; XVI. 172.

Calvi, in Corsica, VI. 106-siege of, XVI. 133.

CALVIN (John), VL 106; XXI 183-his principal followers, 1b -his disregard of the authority of Aristotle, I 16-on usury, ib, 233—his system of church polity, XVIII. 487—his hturgy, XIII 516-on original sin, XXI 205-on theology, 185 et seg.—on interest on money, XII. 427, n. 2—his letter to Socinus, XX 368-his intercourse with John Knox, XIII. 125-his controversies with Servetus, XX. 60.

CALVINISM, VI. 111-in Holland, XI. 573, 588 — countries in which it prevails, IX. 394—predestination, XVIII. 478— Whitby against, XXI. 852-contrasted with Lutheranism, XIII. 740, 741—in Prussia, XVIII 658.

Calvinistic Methodists, XIV. 698 - Bap tists, IV. 427.

Calvisius (Sethus), VI. 111. Calvus (Caius Licinius), VI. 111.

## CAL-CAM

CALX, VI. 112. Calycanthaceæ, nat order of plants, V 191.

Calyceraceæ, nat order of plants, V 196 Calycriforæ, sub-class of plants, V. 179, 189

Calyciphoridæ, polypes, XXI. 1006 Calveistæ, VI. 112 CALYDON, ancient town of Ætolia, VI 112 Calymene, trilobites, XVII. 101, 102. Calymna, coins of, XVI. 376 Calypreidæ, family of mollusks, XV. 381

-fossil, XVII. 110. CALYPSO, VI. 112 Calyptolite, mineral, XV. 87. Calyptorhynchus, genus of birds, XVI

Calyptra, in mosses, V. 145. Calyptræa, genus of mollusks, XV 381. Calyx, VI. 112; V 117, 122.

CAM, in mechanics, VI 112; XIV. 396striking cams, in clock-making, VII. 22, 37.

- river in Cambridgeshire, VI 114. CAMAIEU, or Cameo, VL 112 CAMALDULIANS, VI 112. CAMALDULIANS, VI 112 CAMANDOO, town in Hindustan, VI 112.

Camapuam, river, XIX. 176. CAMARGUE, delta of the Rhone, VI 112: V 241.

CAMARINA, in Sicily, VI. 112-coins of, XVI 365.

Camaroceias, fossil mollusks, XVII. 112. Camarota, genus of insects, IX. 254. Camassei (Andrea), painter, VI 112. Cambacérès, X. 94, 116, 132 et seq Cambax, town in Hindustan, VI. 112.

— gulf of, VI 113

CAMBAYES, cotton cloths, VI. 113.

CAMBER, VI. 113. CAMBERED DECK, VI 113 CAMBERT (Robert), VI 113. CAMBERWELL, in Suriey, VI 113.

CAMBIO, VI. 113. CAMBIST, banker, VI 113.

Cambium layer, in plants, V. 82, 101, XXI. 267. Camblet, VI 121

Cambodia, or Camboja, Asiatic kingdom, VI 113; III 735; VII. 48, 49; XX. 231.

- river, XIV 474 See Mekong CAMBORNE, town in Cornwall, VI. 113. CAMBRAY, town in France, VI 113—cs bric named from, ib -league of, XIII.

CAMBRIA, ancient name of Wales, VI 113. Cambrian period, in geology, XV. 196, 185—did life first begin in this period? 196, n-mollusca of, 403-fossils, XVII. 92 et seq.—rocks in Scotland, XIX. 793 CAMBRIC, VI 113—manufacture of cotton cambric, VII. 449-Irish cambrics sold

for French, VI. 92

CAMBRIDGE, VI 113 — study of mathematics at, I. 807—observatory of, III. 817—Bentley's administration of Trinity College, IV. 658-university, VIII. 745; XXI 459-colleges and halls, 465-examinations at the, IX. 424, 425-libraries, XIII. 397—early printing at, XVIII. 538—societies in, XX. 368

- town in Massachusetts, VI 114; XIV. 341; XXI. 749—Harvard University at, XIV. 340—Mount Auburn Ceme-

tery, V. 62. (H.R.H. Duke of), Staff College

established by, XXI 699 CAMBRIDGESHIRE, VI 114—population and value of property, VIII. 754. Cambridge's roller, II 273.

Cambro-siluman period, in geology, XV. 196. Cambuskenneth, VI. 749

CAMBUSES, VL 115; VII. 611. son of Cyrus, VI 115; XVII 434 —his conquest of Egypt, VIII. 465—his treatment of Crossus, XX. 388, n. 4.

CAMDEN (William), VI. 115-on the origin of the word bigot, IV. 721 — on the Foss Dyke, XVI. 54.

(Marquis of), relinquishment of a pension by, V. 623.

# CAM-CAM

CAMDEN, city in New Jersey, VL 116. - in South Carolina, VI. 116.

- ın Australia, IV. 278, 282. CAMEL, VI. 116, XIV 204; XVII. 632its stomach, III 108; water-cells in, 109—teeth, XVI. 466—dung used as fuel, X. 318-in Egypt, VIII. 431-Arabian, III. 346—Asianc, 739—Bactrian, XI. 454—age attained by, II 234—in Palestine, XVII 191—fossil, 638

- machine for raising ships, VI. 116; XII. 83, XVI. 55, n. 3.

- river, VII. 406

CAMELEON, or Chameleon, species of reptile, VI. 117, XIX. 37-its vertebræ, III. 86—common in Africa, IL 218, XVII. 634-erectile arrangement in its tongue, III 100.

CAMELFORD, town in Cornwall, VI 117. CAMELLIA, genus of plants, VI. 117; V 185—tea-plant of the same family, XXI. 81-culture of, XI. 757.

CAMELOPARD, VI 117; II. 217. See Graffe

Camelopardalis, genus of mammalia, XIV. 209—fossil, XVII. 173. Camelus, genus of mammalia, XIV. 204. CAMENÆ, VI. 117. See Carmentalia.

CAMERA, VI. 117. See California.
CAMERA, VI. 117. 112.
CAMERA ÆOLIA, VI. 117. XVII. 445. OBSCURA, VI. 119, XVI 526, 696; XXI. 117—invention of, I 624

for photographic purposes, XVII. 554; XX. 690

CAMERALISTICS, the science of finance, VI. 119.

CAMERARIUS (Joachim), senior, VI 119. (JOACHM), junior, VI. 119. Camerino, in Italy, VI. 119—delegation of. XVII. 243.

CAMERLINGO, VI 119. CAMERON (John), VI. 119.

(RICHARD), founder of the Cameronians, VI 120, V 432; XVIII. 501. CAMERONIANS, VI 120, XVIII 501 See Reformed Presbyterian Church

CAMEROONS, African river, VI. 120. CAMILLI and Camillæ, VI 120 CAMILLUS (Marcus Furius), VI. 120; XIX. 302.

CAMIS, or Kamis, VI 121. CAMISADE, VI. 121 CAMISARDS, VI 121.

CAMLET, VI 121-manufactory of, XVI 222

CAMOENS (Luis de), VI 121; XVIII 399 cave of, XIII. 756-poetry of, XVIII

CAMOMILE, VI 122. See Chamomile. CAMP, VI 122. CAMPAGNA, Neapolitan city, VI. 122.

- DI ROMA, VI. 122. Campagnola (Giulio), engraver, VIII 800. Campaign, VI 123—plan of, XXI 698

Campan, town in France, VI. 123 (Madame), VI. 123—quotation from, on mesmerism, XX. 419. CAMPANA, Spanish town, VI. 123.

CAMPANELLA (Thomas), VI 123, L 26 and n. 3. Campanero, bird, XVI 750. CAMPANI-ALIMENIS (Matteo), VI 123

CAMPANIA, part of ancient Italy, VI. 123 -wines of, XXI 882. Campanian system of agriculture, XX. 247. CAMPANIFORM, bell-shaped corolla, VI.

CAMPANILE, VL 123.

CAMPANINI, marble, VI. 124. Campanulaceæ, nat order of plants, V. 197. Campanulariadæ, polypes, XXI. 1006. Campanus of Navarre, X. 504.

CAMPBELL (Archibald), earl and marquis of Argyll, VI. 194—one of the leaders of the Covenanters, V. 395—his wars with Montrose, and defeat at Innerlochy, 406

- (ARCHIBALD), earl of Argyll, VI. 124 his opposition to the Test Act, V. 432-his rebellion and execution, 435. - (ARCHIBALD), first Duke of Argyll, VI. 124.

### CAM—CAM

CAMPBELL (Archibald), third Duke of Argyll, VI 125

(Sir Archibald), his expedition against the Burmese, V 646, 783, 784.

(Captain), of Finab, VII 659.

(Captain C. D) his expedition to the Euphrates, IX. 376
— Castle, VI 751.

(Sir Colin), his operations in India against the rebels, XVI 308, 313, 314, 315—in the Crimea, XIX. 504.
—— (GEORGE, DD), VI 125—sense in

which he employs the words physics and physiology, I. 9—his merits as a writer, 220, 222—on the power of truth, XIII. 368—on rhetoric, XIX. 133 et seq.

(James), his report on the United States' post-office, XVIII 419.

(JOHN, LL D), VI. 125.

(JOHN), second Duke of Argyll,
VI. 124—his conduct in reference to the Union, V. 452 - commander-inchief in Scotland, 453.

- (Lord), on the life of Lord Eldon,

XIX. 813 et seq.

— (Lord), on the character of Lord Guldford, VI. 411; of Sir M Hale, XI. 186

(Major), executed for killing in a duel, VIII 232.

(Mr), on landholders in India, XI. 519

- (THOMAS), poet, VI 125—on Chaucer's Canterbury Tales, 434—on the Hebrew poets, XVIII 97, 98—on the characters of the Iliad, 100—on Goldsmith, 124 - on Shakspeare, XX. 70, n. 1, 77, 80, 84—on Sternhold's version of the Psalms, 693-his residence

at Sydenham, 891. CAMPBELTOWN, VI 128.

CAMPDEN-CHIPPING, VI 128.

Campeache, town in Mexico, VI. 128; XI. 609; XIV. 726—taken by the Bucaneers, V. 712.

Campeggio (Cardinal), VIII. 699; XIII.

CAMPER (Peter), VI. 128; XX. 818-his anatomical labours, II. 766—his facial angle, III. 30, 79—his works, VI. 129. Camperdown, VI. 129—battle of, V. 561; X. 107; VIII. 253, 254.

Camphine, XIII. 172. CAMPHOR, VI. 129, 517; V. 204—effects of electricity on its odour, VIII. 599 its narcotic qualities, XIV 439-specific gravity of, XII. 89-optical properties

of, XVI. 680. - of Sumatra and Borneo, V. 185tree in Sumatra, XX. 804.

Campian (Edmund), VI. 130. Campidoctores, VI. 130. Campillo de Arenas, Spanish village, VI. 130.

CAMPITÆ, VI. 130. Campli, town in Italy, VI. 180. Campo de Criptana, in Spain, VI. 180.

Campo Formio, Italian town, VI. 130-treaty of, V. 561; X. 107; XV. 791 CAMPOBASSO, city in Italy, VI 130. CAMPOMANES (Pedro Rodriquez, Conde de),

Spanish statesman, VI. 130. Campsia, genus of insects, IX. 132. Campsia, in Stirlingshire, VI 130—alumworks at, IL 637, 640.

- hills, XIX. 791. Camptocerus, genus of insects, IX. 142. Camptorhynchus, genus of msects, IX.

CAMPUS, VI. 130-Mail-Sceleratus, ib. Martius, in Rome, VI. 130, XIX.

Campylomyza, genus of insects, IX. 226. CAMBOOP, in Assam, VL 130; III 762. Camus (Charles Stephen Louis), VL 131 -his aid in measuring a degree of the mendian, IX. 549.

- (JEAN PIERRE), bishop, VI. 132. (M.), on the termination of the nerves of the hand, II. 816.

- (Mons.), on bibliographical dictionaries, IV. 714-on the classification of books, 715, 716.

#### CAM-CAN

CAMWOOD, dye-stuff, VI. 132; VIII. 287. CANA, of Galilee, VI. 132-miracle at, I.

CANAAN, son of Ham, VI. 132-his descendants, VIII 46—language of the Canaanites, XIII 209.

- (LAND OF), VI 132; XVII 181taken possession of by the Israelites, XII 766-its ancient divisions XVII 192 See Palestine.

CANADA, VI. 182-Mr Pitt's bill of 1791 for the government of, V. 537-invaded by the Americans in 1812, 616-discontents in 1825, 641-rebellion of 1837, -bill for suspending the constitution of, 666-Earl of Durham's administration in. ib -com-law measure of 1842, VII. 384-system of education in, XV. 821-Life Assurance Company of, XII 413-presbyterianism in, XVIII 492—railway statistics, 787—rice of, XIX. 157—maple-sugar, XX 798—elm, XXI 274-red pine of, 275-yellow pine, 1b -weights and measures, 810-map of VI. Plate

CANAL VI. 160; XVI 53-peculiar effect of wave transmission in canals, I. 889 -Mr Scott Russell's experiments on the Forth and Clyde Canal, ib -aqueduct bridges of, III. 338-motion of water in, XIL 136, XIX. 182-Green's canal lifts, XII 83—for irrigation, 612 et seg., 637; XIII 648—manner in which a boat is tracked along a, XX of Aragon, III 393 - in Belgium, IV 611-at Birmingham, 732-Biecon, V. 312—Brindley's canals, 3 67—Bridge-water, VI. 529; XIII 179, XVI. 54— Cambridgeshire, VI 115—Canada, 154 —of Castille, XVII. 178—Cheshire, VI 529—China, 591, 592—Derbyshire, VII 754-Devonshire, 763-Dublin County, VIII 215 - Union Canal, 411 - in Egypt, 430, II 472-England, 722-France, X. 243-Forth and Clyde, VIII. 236, I. 889; XIII. 176-Great Ganges Canal, X. 400—Glasgow and Aidrossan, IV. 833—in Gloucestershire, X. 680-Hampshire, XI. 203 — Holland, 581; Great North Holland, ib , XVI 55— Hungary, XII. 10—Kildare, XIII. 83— Kentucky, 70-of Kiel, 80-Lancashne, 179—Leicestershire, 320—Lanarkshire, 176—Leitrim, 329—Lincolnshire, 492 connected with London, 679—connected with Manchester, XIV 258—Maryland, 330-Massachusetts, 340-Mesopotamia, IV. 364-Mexico, XIV. 715-Middlesex, -St Laurence canals, XV. 522-New Jersey, XVI. 176-Newry, 179-New York, 220, 227—Nicaragua, proposed ship canal through, 245—Norfolk, 289 - Northamptonshire, 207-Nottinghamshire, 340 - Nova Scotia, 843-Ohio, 490-Glasgow, Paisley, and Johnstone, XVII. 89 — Pennsylvania, - in Petersburg, 488 - Prussia, XVIII. 662 — Punjab, 688 — Queen's County, 729—Russia, XIX. 536—Scot-land, 807, 808—Spain, XX. 491—Swe-den, 864—Starlingshire, 704—across the Isthmus of Suez, 789—of the Umted States, XXI 427 See the different Countries, Countries, &c.

- in anatomy, VL 160. – DE PRINCIPE, VI. 160. CANALE, OF CANALETTO (Antonio), VI. 160; XVII. 72

Canandaigua, in Ontario, VI. 160. Cananore, in Hindustan, VI. 160. Canara, in Hindustan, VI. 160-North,

161-South, 162. Canard (M.), on political economy, XVIII

226

CANARY ISLANDS, VI. 162—language of, XIII. 219—height of mountains in, XVII. 644 - weights and measures, XXI. 810—wines of, 887.

Grand, island, VI. 166. CANARY-BIRD, VI. 167; XVI. 761, Cancale, town in France, VI. 167. CANCAO, or Cancar, in Cambodia, VI. 167.

# CAN-CAN

Cancellaria, fossil mollusks, XVII 110.

CANCELLI, VI 167
CANCELLI, VI 167
CANCELLI, VI 167, XVIII, 690—
cancer-cells, XVII 650—ancient treatment of, XX. 815

in Astronomy, VI. 167—tropic of, 168, IV 11; X 481. CANCHERIZANTE, musical term, VI. 168.

Cancrinite, mineral, XV 73 Cancroma, genus of birds, XVI 798

CANDACE, queen of the Ethiopians, VI. CANDAHAR, or Kandahar, VI 168; II

206 et seq -occupied by the Butish in 1839, 208,

CANDAULES, king of Lydia, VI. 169 XIII 747

CANDELABRUM, VI 169, 172 CANDESH, VI. 169 See Khandesh

Candia, island and city, VI. 169; XXI 380 — siege of, by the Turks, 370 — weights and measures of, 810

CANDIAC (J L P. Elizabeth de Montcalm de), VI 170

CANDIDATE, VI 170

CANDLE, VI 170-medicated, 171-rush, 1b -sale by inch of, 1b -excommunication by inch of, ib—how to light one by electricity, VIII 590—its man-ner of buining, XIII 170—from palmoil, XVI 494.

Candleberry, V 207 CANDLEMAS, VI 172 CANDLESTICK, VI 172

CANDOLLE (Augustin Pyramus de), VI 172-on the lotation of crops, II 416on the colours of flowers, V. 151-his classification of plants, 179,

- (Alphonso de), his experiments on the vitality of seeds V 164 CANDY, VI 172 See Kandy.

a preparation of sugar. VI. 172

See Sugar-candy. CANDYING, VI. 172

CANE, tribe of plants, VI 172—sugar-cane, IX. 759, see Sugar-cane—cane-sugar, II 380, VIII 47; IX. 756 — measule of length, VI 172 — river, VI 172

Canea, or Khania, in Candia, VI. 172, kill. 76.

Caneparius's treatise on inks, XII. 384 CANEPHOROS, VI 172.

CANES VENATICI, a constellation. VI

CANGE (Charles du Fresne, Sieur du), VI 173-on the different kinds of churches, 235 — his mistake regarding lazarhouses, XIII 340

CANGI, ancient inhabitants of Britain, VI 173

Cangiagio (Luca), painter, VI 173. Cania, in Candia, XIII. 76 CANICATTI, town in Sicily, VI. 173 Canicula, Sinus or the Dog-star, VI. 173 Canicular period, VI. 670.

CANICULUM, VI 173, CANINE MADNESS, VI. 173; XXI. 575. See Hydrophobia.

- teeth, in man, III 25-in the lower animals, 107.

CANINI (Giovanni Agnolo), VI. 173 Canis, genus of mammalia, VI. 174; XIV. 159, see Dog-dentition of, XVI 461.

- major and munor, two constellations, VI. 174; IV 80

Canisius, or De Hondt (Henry), VI. 174. CANTZ (F R Ludwig, Baion of), VI. 174. CANKER, VI 174—in horses, XXI. 562 in the ear of dogs, 578.

Cannaceæ, nat order of plants, V 211 Cannæ, town in Apulia, VI. 174—battle of, 295; XI. 209; XIX 301; XXI. 711 Cannaleth, painter, XVII. 72. See Ca-

CANNEL-COAL, VI. 174; VII. 118; XV 128—gas yielded by, X. 414 Cannes, French town, VI 174—perfumes

manufactured at, XVII. 408. CANNIBAL, VI. 174 Cannibalism, practised by some American tribes, IL 682—revolting conclusion respecting it, from the supposed supe-

# CAN-CAN

nority of human flesh, III 179the aborigines of Australia, IV 259ın New Zealand, 267; XVI 237 in the interior of Africa, XI 779—among the Fijis, XVIII 275, the Battas, III 270, XX. 805-in Houssa. XI 779

CANNING (George), VI. 174 : XVII 362his accession to power, V 601 - duel with Lord Castlereagh, 606-declaration against Parliamentary reform, 635—bill for the admission of Catholic peers, 1b -appointed foreign secretary in 1823, 637-his eloquence and popularity, 639 -formation of a ministry in 1827 by, 648-his death and character, 649-his corn-bill, ib -his visit to Paris in 1826, X. 192-a disciple of Pitt, XVII 741his resolutions for improving the cornlaws, VII 382-his conduct in reference to slave emancipation, XX. 324-how regarded by the Duke of Wellington, XXI 829, 830

- (Lord), his law of 1857, relating to the newspaper press in India, XVI 204 -his proceedings on the outbreak of the Indian mutiny, 302

CANNON, VI 177-casting of, 178, 181boring of, V. 40—proof of, 42—early use of, in China, VI 584, in Britain, XX. 121 See Artillery, Gunnery.

Cannon bones, in mammalia, III. 82, 83. CANNONADE, VI. 187

Cano (Alonzo), painter, VI 187 CANOE, VI 187.

CANON, VI. 187-cardinal canons, ib domicellary — expectative — foreign — lay—regular—tertiary, 1b.

ın ecclesiastical law, VI 187apostolical canons, 188-paschal, ib-in music, ib; XV. 734-syllogistic canons, XIII, 610, 611, 627; Sir Wm. Hamilton's, 628.

inspired Scriptures, VI. 188; IV 696, 697, XIX. 832 See the names of the different books of Scripture.

- Law, VI. 188-study of the, 737, at Bologna, XXI 449; and at Oxford, 453. Canoniss, VI 191. CANONICA, VI 191

CANONICAL, VI. 191—hours—obedience

sins-punishments-life-letters, ib. CANONICUM, VI 191. CANONIST, VI. 192.

CANONIZATION, VI. 192. CANONRY, VI 192

CANOPUS, star, VI. 192; IV. 79 — an Egyptian deity, VI 192—the pilot of Menelaus, ib.—a town in ancient Egypt,

CANOFY, VI. 192, III. 508. CANOSA, VI 192, 202 CANOVA (Antonio), VI. 192; XXI. 238— character of his sculpture, XIX. 864 busts by, at Venice, XXI 538.

Canrobert (General), XIX. 504. Canso, in Nova Scotia, VI 195, 205 Canstatt, town in Wurtemberg, VI. 195 CANT, VI. 195

Cant-body, in ship-building, XX 184 Cantabria, VI 196; IV 733—Cantabreian mountains, IX. 382—language, XIII

Cantabrigiensis (Codex), XIX. 838. CANTABRUM, VL 196 CANTACUZENUS (Johannes), emperor of the

East, VI. 196. Cantæ, Calednoian tribe, VI 74. CANTAL, in France, VI 196. CANTARINI (Simone), VI 196. CANTEMIR (Demetrius), VI. 196

- (Antiochus), VI 197. Cantener (L P), his works on insects, IX 18.

Canterac, Spanish commander in America, IV. 818.

Canterbury, VI 197—archbishop of, III 423; VIII 743—its suffragan bishoprics, III 423-Becket's shrine at, IV. 562population of, XIII. 67 - cathedial hbrary at, 395

- province in New Zealand, XVL

# CAN—CAP

CANTERUS (William), VI. 198 Cantharidæ, family of insects, IX. 134 CANTHARIDES, Spanish flies, VI 198, XVII. 702-eaten by hedgehogs, III 179. Cantharidine, XIV 439.

Cantharis, genus of insects, IX. 136-poisoning by C resicatoria, XIV. 439. Cantharus, genus of fishes, XII. 287. Canthidermis, genus of fishes, XII 313. CANTICLES, VI 198.

- early printed work, so named, XVIII 523

CANTILEVER, VI. 199 CANTIUM, VI 199 CANTO, VI 199. CANTO-FERMO, VI 199

CANTON, small state, VI 199—in heraldry, XI 330—cantons of Switzerland, XX. 882

in China, VI. 199—opened to Bri-hish commerce by the treaty of 1842, 597—painters of, 581—variation of the needle at, XIV. 53-commerce of, VI. 590, 591-exports and imports, 591silver exported from England to, XVIII. 472-tea unported from, by Britain and United States, XXI 91

- (John), VI 201-hishfe and character, I 723, n 1—the compressibility of water first demonstrated by, 1b; II 102; XII 77-Beccara's letter to, IV 561-on aurora borealis, 250-his labours in electricity, VIII 528—on the electricity of clouds, 581—his phosphorus, XIII, 456, 457—on magnetism, XIV 6, 54—his artificial magnets, 69.

CANTONI (Simone), aichitect, VI. 202. CANTONING of soldiers, VI 202 Cantons Lake of the Four, XX 889. Canton's phosphorus, VI. 202

Cantor (Dr), on the fishery of the Polynemus, XII 278-on the fighting-fish of Siam, 289

Cantova (P. Juan Antonio), on the Caroline islands, XVIII 269. CANTRED, or Cantreth, VI 202. CANTRE, VI 202; XIII 95—Mull of, VI

202. CANUS, or Cano (Melchior), VI 202.

CANUSIUM, now Canosa, in Apulia, VI. CANUTE, or Knut, VI 202, VII 739.

reign of, VIII 661-62-fleet of, XX. 119 -forest laws of, 209. Canutson (Charles), XX 845

Canvas, VI 203-whether used by ancient painters, XVII 52, n 5
CANY, Flench town, VI. 203.
Canynge (William), his ship's, XX 124.
CAOUTCHOUC, VI. 203, V. 73, 206, 294;

IX. 537-scarcely compressible, I. 876, n. 2-its use in making Lougies, V 243 value of the imports of, VIII. 784made of, XVIL 400-mineral, IV. 736; XV 124—quantity exported from Para, XVII 265—setons made of, XX. 827. Caoutchoucine, VI. 204.

Cap (M), on the uses of glycerine, X. 685. VI. 204-of maintenance, 205.

——percussion, XI. 98—composition of, VI. 474; XI 158, n. CAPACITY, VI. 205.

CAPALUAN, Island, VI. 205. CAPARASON, OT CAPARISON, VI. 205. CAPE, VI 205; X 483

- Breton, Island, VI 205.

CLEAR, VI 205, VII. 372. COAST CASTLE, VI 205, VII 45. FEAR RIVER, VI. 205, 246

HATTIEN, town in the island of

Hayti, VI. 205, XI. 258 HORN, VI 205; XI. 631.

Marmot, or Cavy, XIV. 199.

OF GOOD HOPE, VI. 205; X. 711.
See Good Hope (Cape of).

Town, X 714—Table Mountain and the "table-cloth," XIV. 655. - VERD, VI 205; IL 229; XXI. 543.

CAPEL (Lord Arthur), VL 205-his execution, V 413. CAPELL (Edward), VI 206.

CAPELLA (M. Mineus Felix), VI. 206. - star, VI. 206; IV. 79, 82.

# CAP—CAP

Capello (Admiral), his expeditions against the Algerines, II 570 CAPELLUS (Ludovicus), theologian, VI. Capei, order of plants, V 182. spurge, V 206 CAPERCALIZIE, VI. 206, IX. 762; XVI 791-shooting, XX. 225-in Norway, XVI. 324 CAPERNAUM, VL 206; XVII 186 CAPEROLANS, VL 206. CAPERS, VI 207; V 182 Capet (Hugh), X. 11 Capetian dynasty, X 239. Cape, Jewish measure, VI 207. Capias, executive writ, VI. 207 CAPIDJI, VI 207. CAPILLARY, VI 207

— ACTION, VI. 207; XII 90, I. 890 —experiments on, by Hauksbee, Taylor, Jurin, &c., 731, 732-Poisson's theory of, XII. 75-Laplace on, I 820, 890, 732-its effects on barometrical tubes. IV 455

vessels of the human body, II. 796; XVII 662.

in the lungs and foot of the toad and frog, II 797—pulmonary capil-laries, 798—calibre of the tubes, ib. CAPILUFI (Camillo and Lelio), VI 219 CAPISCOLUS, VI 219 CAPITAL, VI 219.

- in architecture, III 508 - in political economy, defined, VII 193-alone gives employment to labour, 139-accumulation and employment of, XVIII. 232 et seq -required for working a farm, II. 366-its natural distribution disturbed by indirect taxes, XXI 57-taxes falling on, 38, 43-not a proper test of the ability of a country to

bear taxation, 75-wages dependent on the amount of, 675—comparative increase of, 676—inefficiency of government interference to increase, 677.

punishments, XIV 445—cases, in England and Wales, VIII. 750 CAPITANATA, in Naples, VI 219; XX. 255 CAPITANIA, VI 219.

CAPITATION TAX, VI. 219.
CAPITATION TAX, VI. 219—censi, ib
CAPITO, or Koepstein (Wolfgang Fabrucius), VI. 219

CAPITOL, in Rome, VI. 219; XIX. 358—museum of the, 369. - at Washington, XXI. 766, 431.

CAPITOLINE GAMES, VI 220.
hill, XIX. 356, 357 CAPITOLINUS (Julius), historian, VI 220

CAPITULARIES, VI 220
CAPITULARION, VI. 221.
CAPITULARION, VI. 221.
CAPITULUM, VI. 221—in botany, V. 115
CAPMANY (Antonio de Montpalan y), VI 221-on insurance, XII 393

Capnio (Johann) See Reuchlin. Capnomanov, VI. 221. Capo di Monti, porcelain factory of, XVIII.

Capo d' Istria, in Illyria, VI. 221 - (Jonn), count, VI 221, XI 23, 29,

Capoeta, genus of fishes, XII 257. CAPON, VI. 221.

CAPONIERE, in fortification, VI 221.
Caporcianute, mineral, XV 75.
CAPPADOCIA, VI 221—coins of, XVI 378 - AD TAURUM, VI 221; XV. 283. Capparidaceæ, nat. order of plants, V. 182. Capped Hock, XXI. 559.

CAPPERONIER (Claude), VI. 223—his cultion of Quintilian, V. 787.

Caproquin, town in Ireland, VI. 228 Capra, genus of mammalia, XIV. 211. CAPRAJA, ancient Capraria, island, VI 228; XIX. 633.

Carri, island near Naples, VI. 223; XX. 240—azure grotto at, XVII. 574—Tiberius's abode on, XXI 245-wines of,

CAPRIATA (Pietro Giovanni), VI. 223. CAPRICORN, VI. 223—tropic of, 224; IV. 11; X. 481.

Caprification, V. 152; IX. 536; XI. 708.

# CAP—CAR

Caprifoliaceæ, nat order of plants, V. 195-region of, XVII. 627 Caprimulgus, genus of birds, XVI. 758 Caprina, fossil mollusks, XVII 107 Caprinella, fossil mollusks, XVII 107 Caprodon, genus of fishes, XIL 265. Capromys, genus of mammalia, XIV, 180 Caprophonus, genus of fishes, XII. 299 Capros, genus of fishes, XII 299 Caprotina, fossi mollusks, XVII 107. Capsa, town in Numidia, VI 224 Capsicim, VI 224, 357; V. 201; XI 745, XIV. 717

Capstan, VI 224, XIV 415; XX. 23. Capsule, in botany, V. 187.

of the eye, III 44.

Captain, VI. 226—naval, XVI. 103—of

the fleet, 1b.

CAPTION, in Scots law, VI. 226. CAPTIVITY, VI 226; XII. 767. CAPTURE, VL 226

Capua, VI 226-taken by Hannibal, 296 -Hannibal's conduct at, 1b -taken by the Romans, 298

Capuchin monkey, dentation of, XVI. 455. CAPUCHINS, VI. 226

Caput, VI. 227—Baroniæ—Lupinum— Mortuum, 1b. Capybara, in zoology, XIV 188-teeth of,

XVI 453, 454. CAR. VI 227 Carabici, tribe of insects, IX. 80. CARABINE, VI 227.

CARABINEERS, VI 227. Carabolo, battle of, IV. 818 Carabus, genus of insects, IX. 96 Caracal, in zoology, XIV. 171.

CARACALLA, Roman emperor, VI. 227; XIX. 346—his crueities at Alexandria, II 470, XIV. 455-baths of, IV 505 cucus of, VI. 734-his war with the Parthians, XVII 313.

- an ancient Roman garment, VI

Caracanthus, genus of fishes, XII 282 Caracara, genus of birds, XVI 741 Caracas, in Venezuela, VI 227, XXI 537—chmate of, II 673.

CARACCI (Lodovico), VI 227; XVII. 78.

(AGOSTINO), VI 227, XVII. 78.

(ANNIBALE), VI. 227, XVII. 78.
on the works of Coreggio, II. 588 Caraccioli, the letters of Pope Clement

XIV. written by, VI 761

— (Francesco), Prince, execution of, XVL 136.

CARACOL, VI. 228. town in Guayaquil, XI. 78 Caractacus, British king, VI 228; V.

Caradoc sandstones, XV. 196. CARAITES, Or Karaites, Jewish sect, VI 228; VII. 504, 505—in Russia, XIX.

CARAMAN, in Asia Minor, VI 229. CARAMAN, II Asia minor, VI 229. CARAMANIA, VI 229—Alexander the Great in, XIII. 771.

Caramaru, V 280, 281 Carambola, tropical fruit, XI 729 CARAMNASSA, 11Ver in Hindustan, VI 229. Carangas, silver mines of, IV. 825 Carangichthys, genus of fishes, XII 297. Carangus, genus of fossil fishes, XII 345. Caranx, genus of fishes, XII. 297 Carapus, genus of fishes, XII. 234. Carat, VI 229; III. 767; VIII. 2; XV

430 and n. 1. Caraudau, his process for manufacturing alum, II 641.

CARAUSIUS, emperor of Britain, VI. 229,

V. 380; II. 586. Caravaca, in Spain, VI 229.

Caravaggio, town in Lombardy, VI. 229 - (MICHAEL ANGELO AMERIGIII DA), VL 229; XVII 69.

- (POLIDORO CALDARA DA), VI. 230 CARAVAN, VI 280-Asiatic commercial, III. 751, 755; VII. 640—of Morocco, XV. 597—from Damascus, VII 640 in Tunis, XXI. 365-of Chinese Turkestan. 367.

CARAVANSERAL VI. 230; XVII. 424 number in Baghdad, IV. 863.

### CAR—CAR

CARAWAN, VI 230, V. 195; XI 745—oil of, XVI 496—seed, IL 337—cultivated in Essex, IX. 337.

Carbon, VI 230, 471, XV. 64, 145— in plants, II. 374; V. 94—bisulphuret of, 477-its compound with hydrogen, nitrogen, and chlorine, 473, 474mentary principles containing, VIII. 18, 19—quantity given off by the lungs, XVII. 663—in coal, XX. 629. See Charcoal.

Carbonaceous substances, composition of, XV 146—as food, XIX. 610

CARBONARI, VI. 231; XII. 655 Carbonate of lime, XV 91, 142-silver, 107-magnesia, 145-iron, XII. 540. Carbonates of potash and soda as manure,

Carbonic acid, VI. 471, 472-a component

part of the atmosphere, IV 181; IL. 375, VI. 464—its influence on health, XIX. 609-absorbed by the leaves of XIX. 609—absorbed by the leaves of plants, II. 379, IV. 182; V 105—decomposition of, II 383, V. 105—Dr Black's discovery of, IV. 737—Mr Cavendish on, VI. 351—in mines and coal-pits, VII. 643—poisonous quality of, XIV. 436; XVIII. 135—specific gravity of, XII. 89-mode of separating it from coal-gas, X. 416-deterioration of coal-gas by mixture with, 432—springs impregnated with, XVII. 602—produced by respiration, 662, 665; XVIII. 73—in mineralogy, XV. 61—

compressibility of, XX. 564

oxide, VI 471; X. 480—poisonous quality of, XIV 486.

Carboniferous period, in geology, XV. 200 —upper series of rocks, 202—plants of, V 234; XVII. 640—fishes of, XII 348, 349, 350, 351; XVII. 117, 125, 640formations in Russia, XIX. 517; in Scotland, 790, 791

Carbonometer, described, XXI. 542. CARBOY, VI 231.

II 376-the cause of "ignis fatuus," X. 409—its poisonous quality, XIV 436—discharged from the earth, XVII. 602. CARCAGENTE, Spanish town, VI 231.

Carcass-roofing, XIX. 387. CARCASSONNE, IN France, VI. 281. Carcel's lamp, XIII 172. CARCERES, VI 231.

Carcharias, genus of fishes, XIL 323 fossil 341—teeth of, XVI 422. Carcharidæ, family of fishes, XII 321, 323. Carcharodon, genus of fishes, XIL 324-

fossil, 341-teeth of, XVI 422 CARD, for combing wool, VI 281-for cotton, VII 443.

- punching, XXI. 787. See Card-

CARDAMOMS, VI 232; V. 211 CARDAN (Jerome), VI. 232-an instance of the union of genius with weakness, I. 557-on aeronautics, II 168-his improvements in algebia, 484, 517; I 557. Cardan's rule, XXI. 339

CARDASS, VI 232. CARDERS, VI 232.

CARDIA, city in the Thracian Chersonesus, VI 232 CARDIAC, VI 232

Cardiadæ, family of mollusks, XV. 349-fossil, XVII. 107.

CARDIFF, in Glamorganshire, VL 232; X. 642

CARDIGAN, VI 234

CARDIGANSHIRE, VI. 233—lead mines of, XV. 245—population and value of property, VIII. 754
Cardilla, fossil mollusks, XVII. 107.

CARDINAL, VI. 235-numbers, ib.-signs,

ib—winds, ib.
points, VI. 225; IV 1, X. 480
ccclesiastical prince in the Romish Church, VI 235—cardinals in France, X. 267-classes of, XVII. 244-college

# CAR—CAR

of cardinals, VII 113; VI. 235; election of a pope by, XVIII 317. Cardinia, fossil mollusks, XVII. 108.

Carding of cotton, improvements in, by Hargreaves, VII 441—and by Ark-wright, 443—wool-carding engine, XXL 922-in weaving, 787.

CARDIOID, an algebraic curve, VL 236. Cardiola, fossil mollusks, XVII. 106. Cardiomorpha, fossil mollusks, XVII. 108. Cardiopoda, genus of mollusks, XV. 377. Cardita, genus of mollusks, XV. 350-fossil, XVII, 108

Carditis in animals, XXI. 574 Cardium, genus of mollusks, XV 349, 347-fossil, XVII. 107.

Cardona, Spanish town, VI. 236—pieci-pice of rock-salt at, XVII. 623. Cardoon, culture of, XI 743.

CARDS, playing, VI. 231-early history of, XVIII 523. CARDUCKI (the modern Kurds), VL 236;

XIII. 136.

Carduelis, genus of birds, XVL 761. CAREENING of ships, VI 236. CAREER, VI 236.

Carelophus, genus of fishes, XII 310. Careni, Caledonian tribe, VI. 74. Caret, VI. 236

CAREW (George), VI. 236. (GEORGE), earl of Totness, VI. 236; XII 479.

(RICHARD), author of the Survey of Cornwall, VI 236

- (Thomas), English poet, VL 237; XVIII. 122.

CAREY (Henry), VI. 237 (H. C), on international copyright, V. 32—on the sales of British

works in America, ib - (WILLIAM), VI. 237.

Carez, his polytypes, XVIII. 552. Cargadors, VI 237 Carcull (Donald), one of the leaders of

the Covenanters, VI. 237; V. 432 Cargo, VI. 237—super-cargo, 1b Carga, in Asia Minor, VI 237—coms of, XVI 376.

Carlaco, town in Venezuela, VI. 238. Carracou, island, XI. 58. Cariama, genus of birds, XVI 797. Carianers, Asiatic tube, XIII. 55. Carians, their war with the Egyptians,

VIII 459 VIII 409
CARIBBEAN SEA, VI 238; XVII 577
CARIBBEE ISLANDS, VI 238; III 272;
XXI 837—granted by James I to the
Earl of Carhsle, IV. 429. See Antilles,

Lesser Caribbs, XI. 57; IX 348; XXL 837—their

skulls and complexions, II 677—their character, 683—in Honduras, XI. 614 language, XIII. 224. Caribert, X. 4. Caricature, VI 238. Caricous, VL 238.

Carides, crustacea, VII. 541. Carres, disease in the bones of animals, XXI. 557. Carignano, Italian city, VI. 238

CARILLON, a chime of bells, VI 238.

CARILLON, a chime of bells, VI 238.

CARILLAN, Island, VI. 238

CARINA, VI. 238—in botany, V 124

Carinaria, genus of mollusks, XV. 377—

C Mediterranea, ib -fossil, XVII. 109. CARINI, town of Sicily, VI. 238 CARINIHIA, VI. 238, IV 311, 309; XII.

Caris, genus of arachnides, III. 389 Carisbrooke, VI 238, XXI 862—Charles I. prisoner at, V. 410, 411.

CARK, VI 238 Carlen (Madame), her novels, XIX. 293, 702.

Carleton (Sir Dudley), VI. 238; V. 890. Carli (Ghan-Rinaldo, Count of), VI. 238 —on castes among the Peruylans,

CARLINE, or Caroline thistle, VI. 239: - Neapolitan silver coin, VI. 239. CARLINES, in a ship, VI. 239. Carlingford, Irish town, VI 289—light-house of, XIII 466—bay, 701

#### CAR-CAR

Carlings of a ship, XX. 187. See Carlines Carlini (M), of Milan, L 826, 827 CARLISLE, VI. 239-table of mortality at III. 255, XII. 400—railway, XXI. 842. fifth earl of, VI. 239.

(Sir Anthony), VI. 239—on the chemical effects of the voltaic pile, I 965; XXL 628.

Carlists, XX. 477, 480 et seq.

CARLOCK, VI. 239. Carloman, X. 7, 578.

CARLOS (Don), his attempts to obtain the Spanish crown, XX 477, 478 et seq., 481—takes refuge in France, X. 210 renunciation of his claim to the Spanish crown, XX, 482

- (San), town in Venezuela, VI. 239 CARLOVINGIAN, dynasty, VI. 289; X. 11. 239

Carlow, in Ireland, VI. 239, 240-extent of land under crops, XIL 515-produce of crops, 517. CARLOWITZ, Austrian town, VI. 241

CARLSBAD, in Bohemia, VI. 241-chmate, XIV. 678-its thermal springs, XV. 37, 39 and n. 1; XVII. 602 CARLSBURG, in Transylvania, VI 241.

CARLSHAMN, in Sweden, VI 241 CARLSKRONA, in Sweden, VI. 241. Carlson (B. A.), his work on insects, IX. 20.

Carlsruhe, German city, VI. 241
Carlstad, in Sweden, VI. 241, 242,
Carlstadt, in Croatia, VI 242,
Luther's opposition to his views

respecting the real presence, XIII. 730, 731, XVIIL 821 CARLUKE, in Lanarkshire, VI 242

CARLYLE (Joseph Dacre), orientalist, VI.

(Thomas), on Novalis, XVI. 342— his Life of Sterling, XX. 691, 692—on Talleyrand, XXI 11, 14—his character of Wither's poetry, 896.

CARMAGNOLA (Francesco Bussone di), VI.

- town in Piedmont, VI. 242. CARMEL (Mount), VI 242, XVII 182 CARMELITES, order of mendicant friars, VI. 242: XVII. 182.

CARMENTALIA, Roman festival, VI 243 CARMICHAEL (Arch. Nisbet), of the Edin-

burgh Academy, VI. 243.

(J. and C), their steam-engine valve-gear, XX. 584.

(Prof.), on Grotius, I. 88. - (Sir T. Gibson), his experiment in irrigation, XII, 620.

CARMINATIVE, VI 243. CARMINE, VI. 243-in dyeing, VIII. 284. CARMONA, Spanish town, VI. 243. CARNAC, French village, VI. 243

temple of, VL 243; III. 436; VIII. 507, 461-to whom dedicated, XI. 384 and n. 7.

Carnat, mineral, XV, 84. CARNATIC, in India, VI. 243; XI. 499

CARNATION, in painting, VI. 244.
——flower, VI. 244.—culture of, XI. 753.
CARNAUL, VI. 244. See Kurnool.

Carne (Mr), on the produce of the Cornish tan mines, XV 241
CARNEADES, founder of the New Academy

at Athens, VI. 244 Grotius' estimate of his ethics, I. 331.

CARNEDD, VI. 244. CARNELIA, Ancient festival, VI. 244. CARNELIAN, VI. 244, 67; II. 281; XV. 69 -mines of, in Hindustan, XI. 458.

Carnic Alps, II. 624. CARNIFEX, VI. 244. CARNIOLA, VI. 244; IV. 311, 309; XIII 135.

CARNIVAL, VI. 244. Carnivora, XIV. 153—their hones, III.
79 et seq—muscles, 91—organs of smell, 94 dentation, XVI. 459 et seg. 464 eyes, III. 97-long intestines, 110peculiarities of organisation, 172—flesh generally unfit for food, 179—pairing of, 181—oils from, XVI. 493—of Africa, II 217-of America, 713-fossil, XVII. 171-distribution of, 681.

# CAR-CAR

Carnivora, insects, IX. 77. CARNIVOROUS, VI 244. Carnonacæ, Caledonian fribe, VL 74. CARNOT (Lazare Nicolas Marguerite), VI. 245; X. 132-on the defence of fortified places, IX. 816-his ments as an engineer, 833-on the character of Talleyrand, XXL 12

Carnsore Point, XXL 845, 846 CARNUNTUM, VI. 245 Caro (Annibale), Italian poet, VI 245

Carob-tree, V. 190. Carocolla, genus of mollusks, XV. 373.

CAROLAN (Twalogh), blind harper, VL 245

Caroli (Peter), VI. 109
CAROLINA (North), VI 245; XXI. 419—newspapers of, XVI. 195—nce in, XIX. 157-settlers in, XXI. 433-debt of, 428.

— (SOUTH), VI. 247; XXI. 419—news-papers of, XVI. 195—rice m, XIX 157—tea-plant in, XXI. 81—settlers m, 433-debt of, 428 - opposition to the union, 441,

Caroline, consort of George IV., V. 612, 614, 627-her arrival in London, 628 -bill of pains and penalties against 629-trial, th -death, 633-character of the proceedings against her, 629

consort of George II, her conversations with Whiston, XXL 850. - ISLANDS, VL 248; XVII 583,

XVIII 269, Books, VI 248.

CAROLOSTADT (Andrew Bodenstein), VI

248. CAROLUS, gold and copper coms so called, VI. 248; XII. 669.

CAROMEL, or Caramel, VI. 248; V. 331 Caron (M), on European imports to Japan, XII 696

Caroor, town in Hindustan, VI. 248. CARORA, in Venezuela, VI 248. CAROTIDS, arteries, VI 248, III. 65

CAROUGE, town in the canton of Geneva, VI. 248

CARP, VI. 248; IX. 764; XII. 255 angling for, III 160 CARPÆA, ancient dance, VI 248

Carpal bones, III 33, 81, 86 Carpathian mountains, VI. 248, IV. 312; IX. 382, XII. 9, 10, XVII. 596, XIX 514; XXI. 682, heights of, XVII. 642 Carpathium mare, VI. 249. Carpathus, now Scarpanto, island, VI.

Carpel, in botany, V. 118, 129, 134. CARPENTARIA (Gulf of), VI 249. CARPENTER (Lant, LLLD), VI. 249.

249

- (Dr), on odorous emanations, XIV. 564-his objection to Brewster's theory of the line of visible direction, 574, n. on fairy rings, IX. 471-on mollusks, XV. 327, 337-on the organology of phrenology, XVII. 559—on cerebral action, 561—cn zoophytes, XXI. 1006,

VI. 249 - distinguished from a joiner, V. 746—work of, in building, ib.; in a farm steading, II 372—health of carpenters, XIV. 442-naval, XVI. 104. (General), V. 454. Carpenteriana, II. 739.

Carpentras, in France, VI. 249; XXL

CARPENTRY, VI. 249-skill of the Romans in, III. 445-distinguished from joinery, XIL 804 strength of different kinds of wood, VI. 249; XX. 170 et seq.; of beams, 760 et seq., 768, 769 See Beams, Centre, Joinery, Roof, Strength of Materials, Timber, Wood.

CARPENTUM, VI. 269. CARPET, VI. 269-weaving of, XXI, 780-French, X. 252; XXI. 920—of Kidder-minster, XIII. 76; XXI. 928—Turkish,

CARPET-KNIGHTS, VI. 272 CARPI, town in Italy, VI. 272.

(GIROLAMO DA), painter, VI. 272 (Ugo DA), painter, VI. 278-his im provements in wood-engraving, XXI.

# CAR-CAR

Carpi (Dr), on the magnetism of the solar rays, XIV 12

Carpini (Giovanni de Plano), VI. 273; X 469 CARPINO, Italian city, VI. 273.

Carpobalsamum, IV. 401 Carpocrates, Gnostic, X. 688, VI. 273 CARPOCRATIANS, branch of the Gnostics,

VL 273 Carpology, VI 273, V 136. Carpus, in man, III 33—the mammalia, 81—birds, 86

Carr (Mr), on weights and measures, XXI.

CARRAC, or Carrack, VI 273; XX 122. Carrageen, or Irish moss, V 218 Carrantuchill, XIII 72

Carrara, Italian town, VI 273-marble, 1b; XV. 92; XIX. 843.

- (M), his work on the Italian glowworm, IX. 18.

Carre (Robert), Earl of Somerset, V 383. CARRENNO DE MIRANDA (Don Juan), painter, VI 273.

Carrera (Peter), on the eruptions of Ætna, IL 194-95

(Juan Jose), a leader in Chili, VI.

Carrett, Marshall & Co, their steam-engmes, XX 608, 610, 614.

Carrhæ, VII 308 - disaster of the Romans at, XVII. 811. CARRIAGE, VI. 273; VII 42—duties on

carriages, 43, XIII 436—wheel carriages, II. 279—roadway, III. 493—metropolitan carriages act, XVIII. 194-for railways, 781, 783. See Coach, Chariot. CARRICK, district of, VI 273, IV 332

on Shannon, in Leitrim, VI 273; XIII. 329.

- on Sure, in Tipperary, VI. 273; XXI 288-woollen manufacture at, 770. CARRICKFERGUS, in Ulster, VI. 273; III. 283.

CARRICKMACROSS, in Monaghan, VI. 274-coal near, XXI. 409—population, 411 CARRIER, VI. 274.

- French revolutionist, X. 93, n. 1. pigeon, VI. 275 shells, XV 382

Carrion-flowers, V 152 CARRON, river in Scotland, VI 275, XX.

\_\_\_\_ iron-works, VL 276, IX. 474; XIX. 245, XX 703; XXI 702, 703, 775 -strength of Carron iron, XII 567, 569. - (Loch), fishery of, XIX. 427, IX. 640, 642

CARRONADE, VI. 276, XI. 140, 133—table of ranges for, 147-invented at Carron, XX 703.

CARROT, VI. 276; V. 195; IX. 760—cul-ture of, II 320; XI. 740. - fly, XI 740.

CARROUSAL, VI. 276. CARRUCA, ancient car; a plough, VI 276. Carrucage. See Carvage. CARRUCATE, VI. 276.

CARRYING, VI 276. CARSE, VI. 276-of Gowrie, 1b.; XVII 456, 457, 458; XIX. 792—analysis of the soil of, II. 393-of Falkuk, IX. 474-of Stirling, VI. 276, 750; XIX. 791; XX.

703. CARSON (Aglionby Ross, LL D), rector of the High School of Edinburgh, VI 276 CARSTAIRS (William), VI. 276

Carstens (Jan), his voyage, IV. 252. CART, VI. 277-of war, 1b.-agricultural, II. 279.

rivers (White and Black), XIX. 8. 9: XVII 89. Cart-horse, II, 388; XI 661. Cartago, VII, 425.

CARTE (Thomas), VI 277. CARTE-BLANCHE, VI. 277. CARTEL, VI 277—cartel-sh<sup>5</sup>p, ib, Carter (John), his work on pointed architecture, III. 457. Carteret (Captain), his discoveries in Aus-

tralasıa, IV. 264

- (Sir George), XVI. 176. - islands, IV. 264.

# CAR-CAR

CARTES (Réné des), or DESCARTES, VL 277; I. 56, 609-Condorcet's character of, 56-may be regarded as the father of the experimental philosophy of the mind, ib -his clear and precise conception of reflection, 57-on the mind, ib et seq, 243-unacquainted with the works of Bacon, 244—the articles of common belief which he proposed to subject to severe scrutiny, 59-consciousness of his own existence, ib; XIV. 616-his argument for the existence of God, I. 69, and n 4; yet accused and persecuted as an atheist, 60, n 1-his precocity of genius, 61-principal articles of philosophy, 62—his mathematical re-searches the most solid basis of his fame, 62 and n 1—his claims to the discovery of certain leading ideas erroneously ascribed to later metaphysicians, 63—early progress of his doc-trines in England, 63, 64—coincidences between passages in his works and in Novum Organon, 59, 244—origin of the true philosophy of mind to be dated from his Principia, 67-his errors, 68his theories as to the connection between soul and body, 1b -on the primary and secondary qualities of bodies, 63, 245-reasons why he fixed on the pineal gland as the seat of the soul, 69 -Bacon never mentioned by, 70ments of his Meditations, 243-erroneously called a nullibist, 246-his ments as a writer, 247-his doctrines concerning ideas misunderstood, 109, n. 2, 251-52-on the freedom of the will, 267-Coleridge's assertion, that he anticipated Hobbes in his discourse on method, erroneous, 444-his mode of philosophising opposite to that of Bacon, and greatly inferior, 584, 585—on the theory of motion, 594—on the preservation of the same quantity of motion in the universe, ib —on centrifugal force, ib.—first who attempted to reduce all the phenomena of the universe to the same law, 609-his theory of vortices, 610-his claim to the discovery of the true law of refraction ill founded, 627his theory of light, 628-his optical discovernes, 628-29, 747, II 87, XVI 530, 578-his explanation of the rainbow, 629-on the force of a moving body, I. 654-his improvements in, and new applications of, algebra, 560; IL 486, IX. 671—on the pressure of the atmosphere, IV. 450—his barometer, 453 his attempt to solve the problem of Apollonius, III. 302-his opinion of brutes, V. 700-on burning-glasses, VI 1, 4-his theory of the deluge, VII 720 on magnetism, XIV. 4-on equations, IX 287—analytical geometry originated with, X. 542-on metaphysics, XIV 600, n. 1 and 2 et seq—did his opinions give rise to those of Spinoza? XVII 234 or pneumatics, XVIII. 27—on telescopes, XXI. 119—his dictum, "cogito eigo sum," 185—on the ontological pioof of the existence of God, 186, 187. Cartesian devils, XVIII. 51.

Cartesians, VI. 280. Carthage, VI. 280; VIII. 16—site of, II. 223—commerce, VII. 185—wars with the Romans, XIX. 309, 310; and Syracusans, VI 283, 285; XX 899—final destruction of, 314-conquests in Spain, 457—naval power of, 117—vessels, XVIII 161, n. 2—foundation of, XXI. 405-ruins of, 365.

CARTHAGENA, VI. 303-building of, 292 or Cartagena, capital of New Gra-nada, VI 304, X. 797—British expedi-tion against, V. 458—plundered by Points and the bucaneers, 712.

Carthagnian alphabet (Punic), II. Plate
—army, III. 629—voyages, X. 460, 461
—human sacrifices, XIV. 361—slavery, XX. 320.

Carthalo, Carthaginian general, VI. 289. Carthamus, a dye-stuff, VIII. 286 CARTHUSIANS, VI. 304; V. 697.

# CAR-CAS

Cartier (James), Gulf of St Lawrence discovered by, II 699; VI 158.

Cartilage, II 831, IX. 758-whether contained in bone, II. 827, 829-structure of, 832 - syncvial membrane of, II. 840-ensiform, III 9-the five cartilages of the larynx, 50—of the ribs, 10—of the windpipe, 66—fibro-cartilage, II 832.

Cartilaginous fishes, XII 205, 319 Cartismandua, queen of the Britons, V 377, 378

Cartland Craigs, XIII, 174-bridge at, III

CARTOON, VI 304; XIX. 867 and # Raphael's, XVII 68-Angelo's, XVIII.

CARTOUCHE, VI 305-in hieroglyphics, ib CARTRIDGE, and cartridge-box VI. 305— wire, XX 214.

CARTWRIGHT (Edmund), D.D, VI 805— —power-loom invented by, VII 450 XXI. 787-his combing-machine, 924 (Rev Edward), his 10pe-machine

XXX 406 - (Thomas), Puritan divine, VI 305. (WILLIAM), VI. 305.

CARUCATURIUS, VI. 305 Caruncle of the eye, III. 45-in the rumi-

nants, 97-wanting in the rodentia and in birds, 97.

Caruncles, in botany, V 140 CARUPANO, in Venezuela, VI. 305. Carus, Roman emperor, XIX. 349

(C Gustavus), his works on insects, IX. 15-his 1 emarks on the dissection of minute animals, 29-on the circulation of an ephemera, 50—on the infusoria, III 197—on phienology, XVII 565.

CARVAGE, VI. 305 Carvalho, marquis of Pombal, his admi-nistration, V 284, 285,

CARVER, VI 305-and gilder, V 755. CARVING, VI 305, XIX 843 CARWAR, in Hindustan, VI 306. Cany (Lucius), Lord Falkland, VI. 306 See Falkland.

(ROBERT), LL D., VI 306 - (Mr), his marine balometers, IV.

458. CARYA, or Caryatis, ancient festival, VI

CARYATIDES, VI. 306; III 442, 467, 508. Carychium, genus of mollusks, XV 375 CARYL (John), English poet, VI 306. (JOSEPH), nonconformist divine,

VT. 206 Caryocatactes, genus of birds, XVI. 765 Caryophyllaceæ, nat, order of plants, V. 184-region of, 227; XVII. 627.

Caryophyllæus, genus of entozoa, XXI

Caryopsis, a kind of seed-vessel, V. 137. Caryota, genus of palms, VI 306. Carysfort (Lord), on weights and mes sures, XXI. 799.

CASA SANTA, VI. 306 See Loretto CASAL MAGGIORE, town in Lombardy, VI.

CASALE, in Italy, VI 306. Casalnuovo, Neapolitan town, VI 306. Casanata library, at Rome, XIII 412. Casanova, effects produced on, by a work

entitled La Cité Mystique, &c., I. 442. CASAR-DE-CACERES, Spanish town, VI. 306. Casas (Bartolommeo de las), VI. 306.

CASATI (Paul), VI. 307 CASAUBON (Issac de), VI. 807; XVII. 528 -on diptycha, VIII, 43-Casauboniana, II. 789—his intimacy with Denis Petau, XVII. 480—his editions of Strabo's Geography, XX. 744.

- (Meric), VI. 807. Casers, Persian city, VI. 308, Casbols (Prof.), his method of making barometers, XII. 101.

CASCADE, VI. 308. See Waterfall.
——mountains, XVI. 705; XVII. 645; XXI. 766.

CASCAES, Portuguese town, VI. 808. CASCARILLA, a tonic bark, VI. 308; V. 206. Casco. See Cuzco.

# CAS-CAS

Case, VI. 308-in grammar, 1b; X. 748, 789-in printing, VI 308; XVIII 539case-shot, VI 308, XI. 142.

CASE-HARDENING, VI. 308 Caseme (vegetable), II 382; IX. 757-in

the milk of the cow-tree, VII 470 - (animal), the chief ingredient of cheese, VIL 624; VI. 523, XV. 11; XVIL 654; XIX 610—composition of.

Casentino, in Tuscany, XXI. 393 CASERTA, town of Naples, VL 308-palace of, XV. 782; XXI. 522.

Cash-accounts, in Scotch banks, XV. 485 Cash-book, in book-keeping, V. 17-petty cash-book, 23,

Cashan, Persian city, VI. 308. Cashel, in Tipperary, VI. 308; XXI. 287, 288-rock of, 286, 288.

CASHEW, or Cashew-nut, VI. 308; V. 190 XVI. 395 - yields a black dyestuff, VIII. 304.

- order of plants, V. 189. Cashgar, III 755, XIII. 54. CASSIER, VI. 808.

CASHMERE, in northern India, VI. 308; XVII. 598-wool, XXI 906-shawls, VI. 309, XIV. 211; exports of, from France, XXI. 920—trade with Turkestan, 367

goat, XI 455; XIV. 211. Cashy, in Hindustan, VI 310 Casimii, kings of Poland so named, XVIII 138, 140, 141, 142, 144; XX 851. Casini (Michael), VI. 310

CASK, VI 310-invention and construction of, VII 341-made by machinery at Deptford, VIII, 80-gauging of, XIV. 524-large size of sherry casks, XXI. 951. Caston (William), letter-founder, VI. 310 Casmarhynchus, genus of brids, XVI. 750 Casnonia, genus of insects, IX. 82. Caspe, Spanish city, VI 310

Casper (D1), on the statistics of mortality, XV. 623, 684

Caspian Sea, VI 310; X 469, XVII 606—its level lower than that of the ocean, IV 468; XVII 591

languages, XIII. 216
gates, XVII. 420.

CASQUE, VI 312 Cassana (Nicolo), Italian painter, VI. 312 Cassander, king of Macedon, VI. 312;

XIII. 775. CASSANDRA, VI. 312.

Cassano, town of Naples, VI. 312.
Cassaton (Court of), in Belgium, IV. 614
—in France, X. 282—the Two Sicilies, XX. 253 CASSAVA, VI. 313; V 206, 294; XIV 716

Casse (Du), his Memonies, XV. 796. Cassegram (M), his telescope, XVI 533, XXI. 127.

CASSEL, in Germany, VI 313, XL 362 ———————— in France, VI, 313

Cassencarrie, granite quarry at, XIII. 101. Cassia Bark, VL 313; IV. 445; VL 727 -cassia buds, 313-oil of cassia, XVI.

Cassiani, ammonites, XVII. 113. Cassianus, or Joannes Elemita, VI. 313. Cassicus, genus of birds, XVI. 762. Cassida, genus of msects, IX. 148. Cassidaria, fossil mollusks, XVII. 110. Cassidarie, family of insects, IX. 148. Cassidula, genus of mollusks, XV. 375. Cassidulidæ, fossil echinoidea, XVII. 100;

XXI 991. Cassimire, or Cashmire, VI. 318 Cashmere

Cassini (Johannes Dominicus), VI 313director of the Royal Observatory of Paris, III. 802-his astronomical discoveries, I. 614; III 803; IV. 69the planets Venus, Mars, and Jupiter, 65, 66, 69-his barometer, 454-on refraction, 9—on the orbits of comets, VII. 167—on the annual variation of the needle, XIV. 52, 58—his micrometer, 758—on the degree of meridian, IX. 549—his telescopes, XXI. 119.

(JAMES), VI. 313—his astronomical

labours, III. 805

# CAS-CAS

Cassini (De Thury, Cæsar François), VI. 313, III 805-on the arc of meridian, IX. 549-his memorial to the British government respecting longitude, 550; XXI. 330

Cassino (Monte), XIII. 387. CassioDorus (Magnus Aurelius), VI. 313. Cassiopeia, VL 314-a constellation, ib.; IV. 79.

Cassiquiare, river, XVI 716; XVII 604. Cassis, ancient helmet, VI. 314

- genus of mollusks, XV 366-fossil XVII. 110. - a French seaport, VI. 314.

Cassiterides, V. 376 Cassiterate, mineral, XV 109. Cassiterotantalite, XV. 110.

Cassus (Avidus), XIX. 344.
——— (Caius), VI 314

(C. Longinus), VI 314. (Longinus and Spurius), VI. 314. a Roman surgeon, XX. 812.

powder of, VI 314. Cassivelannus, British chief, V. 377. Cassock, VL 314.

Cassoon, in architecture, VI 314; III

CASSOWARY, or Cassuary, VI 314, XVI. 796; XVII. 634-in Paraguay, 268. CAST, VI 314-casts of medals, 325animals, vegetables, &c., 324. See

Casting. Cast-iron, XII 566, See Iron. Cast metal and cast-non. See Iron. Castagno (Andrea del), painter, VI. 314 Castalia, genus of mollusks, XV 349. CASTALIUS FONS, or Castalia, VI. 814. CASTANEA, genus of plants, VI. 814; XI

CASTANET, VI. 314 Castanha nuts, V 192.
Caste, VI 314—in India, V. 267; XI. 471;
effects of there, VII. 437—in Ceylon, VI 398-no sanction for in the sacred books of the Hindus, XVII. 541-English society once divided into castes, VIII

caste, X. 737. Castel (Louis Bertrand), VI. 320 - (Mons), his experiments in hydrauhes, XII. 113, 117, 121, 122 et seq CASTEL GRANDOLFO, Italian village, VI.

761-feudal system essentially one of

NAUDARY, town in France, VI. 321

-beet, XX. 796. -Sarrasin, town in France, VI. 321

Vetrano, town in Sicily, VI. 321. CASTEL-A-MARE, city on the Gulf of Naples VI. 320; XX. 240.

town in Sicily, VI 320-gulf of. XX 343.

CASTELL (Dr Edmund), VL 321—aided in the publication of Walton's Polyglot Bible, XXI. 695. CASTELLAN, VI. 321.

CASTELLATION, VI. 321. CASTELLI (Bernardo), VI. 321.

- (Giovanni Battista), VI. 321. (Don Benedetto), on hydrodynamics, XII. 70—on the formation of bars in rivers, XVI. 80

(VALERIO), VI 321. Peruvian general, IV. 882. Castellina, mines of, XXI. 393 CASTELLIO (Sebastian), VI. 321. CASTELLON DE LA PLANA, VI 321. CASTELLORUM OPERATIO, VI 321. CASTELO BRANCO, POrtuguese town, VI

- DE VIDE, Portuguese town, VI. 821 CASTELVETRO (Ludovico), VI. 321. Casti (Giambattista), Italian poet, VI. 321. CASTIGATION, VI. 322. CASTIGATORY, for scolds, VI. 322

Castiglione, numerous towns in Italy so called, VI. 322. - (BALDASSARE), VI. 328.

DELLA STIVIERE, VI. 323-battle of. TIT. 690. - (GIOVANNI BENEDETTO), VI. 323. or Gabii, X. 364. CASTILE, Old and New, VI. 323, XX. 493

-differences with Portugal, XVIII. 380,

#### CAS-CAT

382-Moorish kungdom of, XX. 461, 462 -canal of, 491.

Castile soap, XX. 366, 367. Castillon, town in France, VI. 323. Casting, VL 323-history of the art of, 180, 181-of cannon, 178, 183 et seg-in

sand, or earth, 323, IX. 843-of specula for telescopes, XXL 135-of types, 401, 402 - with plaster of Paris, VI. 323; XV. 293; XI. 172-in the manufacture of pottery, XVIII. 441-of statues, XIX, 843.

- a horse, &c, XXI. 559, n 1. Casting-net, XIX. 91.

CASTLE, VI. 326-castle-stead, 327.

- Campbell, in Clackmannanshire, VI 751. Castlebar, town in Ireland, VI 327;

XIV. 372. Castleblayney, town in Ireland, VI. 327,

XV 411. CASTLECARY, station on the Edinburgh

and Glasgow Railway, VI. 327. — town in Somerset, VI, 327.

Castlecomer, Irish town, VI. 328—col-heries of, XIII. 84—rainfall at, XII. 504.

CASTLE-DERMOT, Irish town, VI. 328. CASTLE-DOUGLAS, Scotch town, VI. 328; XIII. 100.

- and Portpatrick railway, XX. 746 Castle-Island, Irish town, VI 328. Castlereagh, Irish town, VI. 328

- (Lord), his accession to power, V 601—charge against, concerning the barter of a Bengal writership, 605—his duel with Canning, 606; VI. 176-secretary of foreign affairs, 612 - consequences of his death, 637.

Castlerising, in Norfolk, XVI. 291. Castleton, in Derbyshire, VII. 754, 755. CASTLETOWN, in the Isle of Man, VL 328; XIV 245, 246,

Castnia, genus of insects. IX. 209
Castor, VI 328—in astronomy, ib—in zoology, XIV. 185.

- cake, as manure, II. 405—analysis of, ib. - oil, VI. 328; V. 206; XVI. 495its specific gravity, XII. 89—employed to form microscopic lenses, XIV 769 male flower of the plant yielding, V.

AND POLLUX, VI. 328; VIII. 36; XIX. 298 — stars, X 447 — meteor, VI. 328; VIII 588, XIV 470

CASTOREUM, or Castor, VI. 328; IV 555 CASTRATION, VI 329, IX. 375—of horses, II. 339; XXI. 571—lambs, II. 349—crime of, XIV. 428 See Eunuch. Castrén (Alex.), on Turanian philology,

XVII. 535. Castres, in France, VL 329.

Castri, Greek village, VII. 710. Castro, Neapolitan sea-port, VI. 329 Del Rio el Real, and Urdiales, Spanish towns, VI 329.
Giovanni, Nuovo, Reale, Sicilian

cities, VI. 329. - (Isaac de). See Orobio (Baltasar).

- Villari, town in Naples, VI. 829. Castraccani), VI. 829. CASTRUM DOLORIS, VI. 330

CASUALTY, VI. 330—as applied to human actions, XIII. 262—idea of, as referable to reasonings on human character and conduct, XIX, 123

Casualinaceæ, nat. order of plants, V. 208. Casuarius, genus of birds, XVL 796. CASUIST, VI. 330.

CASUISTRY, VI. 330.

CASWEEN, VI. 808.
CAT. VI. 880; XIV. 170—its fur, X. 349—its power of resisting starvation, IIL

—its power of reasing starvation, II.

180 — worshipped by the Egyptians,
VIII. 492—tailless cat, XIV. 248.

Cars'-eye, a gem, VI. 330; XV. 69.

Cat-fish, XII. 309; IX. 764; XVI. 424. CAT-GUT, VI. 330.

CAT-HEAD, VL 888. CAT-BALT, VI. 880. CATA, a prefix, VL 380. CATACHRESIS, VI. 890.

G

# CAT-CAT

CATACOMB, VI. 330 Catadioptric light, XIII. 474—lenses, 477—glass mirror, 478—microscope, XIV.

- holophotal apparatus, XIII. 477. CATADROMUS, VI 330 CATAFALQUE, VI 330. CATAGOGIA, VI 330. CATAGRAPHA, VI. 330.

Catalan forge, XII. 538, 544.
CATALDESY, VI 330; XVII. 700.
CATALOGUE, VI. 331—raisonné, ib—catalogues of the fixed stars, ib., IV 80, 95, 143; III. 791—bibliographical, IV 713, 715—for libraries, XIII 377—of monastic libraries, 387.

CATALONIA, VI. 331, XX. 493—vineyards of, XXI 884.

Catalpa syrıngæfolia, XVII 764. Catalysis, in chemistry, VI 441 Catalysotype, XVII. 551. CATAMARAN, VI. 331; XIII 803 Catamarca, in La Plata, XVII. 779. CATANDUANES, island, VI 331.

CATANIA, VI 331; XX. 244, 255 - laid waste by the eruptions of Ætna, II 193-94—amber found at, 656—ancient coins of, XVL 366

coins of, XVL 366
Catantostoma, fossil mollusks, XVII 110.
CATANZARO, Neapolitan city, VI 331.
Cataphagus, genus of insects, IX. 106
CATAPHRACT, VI. 331.
CATAPULTA, VI. 332
CATARACT, VI. 332—of the Nile, VIII.
425, 514—in Lapland, XIII. 234 See

Waterfall.

disease of the eye, VI. 332; XIII 461-in domestic animals, XXI. 578. Catarhina, dentition of, XVI. 456.
CATARRE, VI 332—in the domestic animals, XXI 572.

Catastomus, genus of fishes, XII. 257. CATASTROPHE, VI. 332. Cataulus, genus of mollusks, XV. 365.

Catawba wine, XXI. 888-river, IV. 246, CATCH, in music, VI 332-eatch-word, ib.

Catch-work irrigation, XIL 614 Catcot (Mr), on the Deluge, VII 720. CATEAU (Le), town in France, VI. 332-battle of, X. 87. CATECHESIS, VI. 332

CATECHISM, VI. 332 - why not used in Apostolical times, I. 494—proper to be used now, 502—Cranmer's, VII. 483,

n. 7
CATECHIST, VI. 332.
CATECHIST, VI. 332.—as a dye stuff, VIII
296.—in tauning, XIII. 206.
CATECHUMEN, VI. 333.
CATEGORY, VI. 333.—Aristotle's categories,
III 889.

III 552

Catelan (Abbé de), IX. 676. Catena (Paulus), VII. 307—his cruelties in Britain, V. 380—burnt alive, VII

Catenaia, mountains in Tuscany, XXI. 392, 393.

CATEMARIAN CURVE, VI 333; III. 406; IX. 746; X. 505; XX. 544—James Bernoulli on, IV. 672—geometry of the, I 876.

CATERPILLAR, VI. 383; IX. 53, 204 et seg. — processionary, 213 — geometræ or surveyors, 216 — aquatic, 218 — fungus surveyors, 216 — aqu parasitic on, V. 217.

Catesby, his connection with the Gunpowder Plot, V 384.

(Mr), on birds, XVI 726—on the turtle, XIX 19—on the guana, 33—green haard, 35—on a species of rattlesnake, 69.

CATHARINA SANTA, VI. 333. See Santa

Catharina.

Catharine, VI. 333—kmghts of St Catharine of Mount Sinai, ib.—fraternity of St Catharine at Sienna, ib.

- de Medicis, Davila's character of, VII. 666. Cathartes, genus of birds, XVI. 789.

CATHARTICS, VI. 333. Cathcart (General), XIII. 35.

#### CAT—CAT

Cathcart (Lord), on national defences XXI. 702.

CATHEDRA, VI. 333

CATHEDRAL, VI. 333 - Gothic, III. 447, 456, 480-architecture of, 409, 516, 517 -libraries, XIII. 394-society in cathedral cities, X. 694-erection of, by freemasons, XIV 337.

Catherine, consort of Henry the Eighth. VIII. 697, 698, 701.

- I., empress of Russia, VI 333reign of, XIX 481-accessions of termtory under, 494.

II, empress of Russia, VI 334-reign of, XIX 484-science encouraged by, Il. 65. - PARR, VI. 333. See Parr, Catha-

rine - (St), order of, VI. 337.

Catherineburg, meteorological observa-tions at, XIV. 686.

Catherine-wheel window, IV. 512. Catherwood, his illustrations of the monuments of Central America, III 502-on the origin of these remains, ib.

CATHETER, VI. 337, VII. 601, XX. 831 CATHETUS, VI 337—of incidence—of reflection - of obligation - in architecture, ib; III 508. CATHOLIC, VI 337—church—king, ib.

meaning of the term, I 484, n. - Association, in Ireland, XII 501; V 642, 647, 653.

CATLINA (Lucus Sergus), VI. 337, 717-his conspiracy, XIX. 323.
Catkin, in botany, V. 115.
Catla, genus of fishes, XII. 257

Catlow (Maria E), her work on insects, IX. 23

CATMANDOO, city in Hindustan, VI 337; XIII 76; XVL 144, 148 Caro, the Censor, VI 337; XIX 314—
his mission to Carthage, VI 300—on
irrigation, XII 621—his dislike to the
medical profession, XIV 453.
— of Utroa, VI 338; XIX 323, 326;
XYI 452—his energy on Carthage

XXI. 498—his speech on Cathline's conspiracy, XX. 675.

(Dionysius), IV. 435, n. 1. —— Street conspiracy, V 628. Catopra, genus of fishes, XII. 277. Catoprion, genus of fishes, XII 247. Catopterus, genus of fossil fishes, XII 334. CATOPTRICS, VI. 339; XIII 451, XVI. 552-catoptic lights for lighthouses. XIII 468, 471-catoptric micrometers,

XIV 749. CATOPTROMANCY, VI. 339. Catoptrophorus, genus of birds, XVI 805 Catopygus, fossil echmoideæ, XVII 99,100. Catoxantha, genus of insects, IX. 105.

Catoxantha, genus of insects, IX. 100.
CATRINS, in Ayrshire, VI. 339—weaving factory at, VII. 450
CATROU (François), VI. 339
Cats (Jacob), Dutch poet, XI 591.
CATSKILL, town in New York, VI. 340.
——mountains, VI. 340; XVI. 213.
Cateny, IY. 755. Catsup, IX. 765.

Cattaro, in Dalmatia, VI. 340 Cattegat, VI. 340; IV. 402, 403. CATTI, an ancient German nation, VI. 340; XIII. 111; X. 576.

Cattle, breeds of, II. 340-breeding and attie, breeds of, II. 340—breeding and management of, 343 — darry breeds, 342; VII. 621—grazing of, II 325—fattening of, 344—mode of housing, 345—diseases of, XXI. 554—of Aigyleshire, III. 527—England, VIII. 723—America, II. 714—Arabia, III. 347—New South Wales, IV. 280—Derbyshire, VIII. 544— VII. 755-Devonshire, 764-Dumbartonshire, VIII 236—Dumfriesshire, 237 -Durham, 267-Lincolnshire, XIII, 491 Lombardy, 649—Egypt, VIII 432— Herefordshire, II. 341; XI. 349—Galway, XIII 100-Lanarkshire, 175cattle-trade of Ireland, XII, 519—history of, XIV. 214—wild cattle at Chillingham Castle, XVI. 300-of Norway, 325-fed on fish, XIII 241-in the different countries of Scotland, XIX. 798-Sweden, XX. 861-Switzerland, 889-Sussex, 839-Wurtemberg, XXI. 938.

# CAT-CAV

Cattle murrain, IL 49. CATTOLICA, town in Sicily, VI. 340. CATULLUS (C. Valerius), Roman poet, VI 340-poetry of, XVIII. 104 Caturus, genus of fossil fishes, XII. 336,

XVII. 126. Catwater, V 307, 308, XVIII. 17. CATZ (Jacob), VI 340 CAUBUL, VI 340, II 201 et seq. See

Cabul

Cauca, in New Granada, X 797 Caucasian race of man, II 775; XI. 541 -languages, IX. 390, XIII 199, 215aborigines of America compared with, II. 678—its subdivisions, 775

CAUCASUS, VI. 340. IX 382, III 734; XVII 420, 597; XIX 514, 551, heights

of, XVII 643

Cauchy (Augustin Louis), I. 920-his vast mathematical labours, 1b -his modification of Fiesnel's theory of reflection, ib -on the dispersion of light, and its non-dispersion in free space, 921—his theory of waves, XII. 74—on equations, XI 290, 306—on optics, XVI 546, 686 Caudal vertebræ, III 76, 84—in fishes, 89 CAUDEBEC, French town, VI 343
CAUDEBEC, French town, VI 343
CAUDETE, Spanish town, VI 343.
Caudex, in tree-ferns, V. 143.
Candine Forks, disaster to the Roman

army at, XIX. 304

Caufiristan, in Asia, VI 343 CAUKING, or caulking of ships, VI. 343; XX. 118, 189, 190.

Caulabagu, town in Hindustan, VI 343. Caulamcourt (Duke of Vicenza), X. 160, 167, 168, 172. Caulfield (M1), on salmon fisheries in Ire-

land, IX 625. Cauliculus, in architecture, III 508. CAULIFLOWER, VI 344; IX. 760-culture

of, XI 787. Cauquenas, hot springs of, VI 543. CAURSINES, Italian usurers, VI 844 Caus (Salomon de), his steam apparatus,

XX 574. Causalty, or causality, XIV. 599, 600-law of, as applied to human actions, XIII 262-phrenological faculty of, XVII. 563.

Causans (Chevaher de), his fancied discovery of the quadrature of the circle, XX. 522

Causation, XIV 600 and n 4, 601-Malehanche on, I 78—Hume's theory of, 211, XIX 710—Glanvil on, X. 643— Anstotle on, III 540—Dr T. Brown on, V. 683.

CAUSE, VI. 344

and effect, Dr Brown on the relation of, V. 683—charge against Sir J Leshe for his opinions on, XIII 345— Kant on, 47. Causeway, VI 344.

CAUSSADE, town in France, VI. 344. CAUSSIN (Nicholas), VI. 344 CAUSTIC CURVE, VI. 344; XVI. 571, 576,

CAUSTICS, VI 344 CAUTERY, VI 344; XX. 815 et seq. CAUTIONER, in Scots law, VI 344. Cautiousness, XVII 562 Cauvery, 1iver, VI. 243, 356, XXI. 18, 328, 329,

CAVA, a town of Naples, VI. 344. Cavaignac, General, X 238. (Godfrey), X. 205, 208. CAVAILLON, French town, VL 344. CAVALGANTI (Guido), VI 344 CAVALIER, VI. 344—English cavaliers of

veries, I. 552-55; IX. 671-on the concentration of cold by reflection, VII 99, n. 2, I. 762 CAVALLINI (Pietro), VI. 844.

CAVALIC (Theirus), VI. 344 — Volta's letters to, I. 963—his experiments in aeronautics, II. 170 — on electricity, VIII. 567, 602—his self-charging electrical jar, 618—on the electrophorus,

# CAV-CAY

607 - his atmospherical collector of electricity, 608-his mode of using the electrical doubler, 615 - his electrical multiplier, 616-his electroscope, ibon the air-pump, XVIII 41—on magnetism, XIV. 22—magnetism of brass, 26-his miciometer, 759

Cavallo, Turkish town, XIII 55 CAVALLUCI (Antonio), painter, VI. 347. CAVALRY, VI 347, 602—Roman, III 633-British, 665—Austrian, 645—Prussian, 646—Russian, 648—French, 640, X. 270—Spanish, III. 643—Turkish, 658. See Army

CAVAN, in Iteland, VI 347.

CAVANILLES (Antonio Jose), VI 349. CAVE, VI 350, XVII 601—artificial caves, III. 435—of Baumans, IV 514 temperature of, VI 778—in Hungary, XII 10—Kentucky, XIII. 69—Indiana, XII 375—Honduras, XI 609—caves with fossil remains, XVII 639; in Britain, 1b.; XV. 215-in Skye, XX 317-Sutherland, 841-Tipperary, XXI. 286. See Grotto.

- (EDWARD), printer, VI 350-literary employment given by, to Dr Johnson, XII 795

- (Dr William), VI 350-on miracles in the fourth century, II 663. CAVEDONE (Jacopo), VI 350.

Cavendish (Chailes, Lord), on the depression of meicury in capillary tubes,

(Henry), VI 350 — biographical notice of, I. 929—his wonderful range of scientific knowledge, ib—lightness of hydrogen determined by, II. 170 on the composition of the atmosphere, IV 180—his claims to the discovery of the composition of water, I 929, 930; VIII. 594—on chromatics, VI. 645—his chemical discoveries, I. 929—his experiments on latent and specific heat, 930singular personal characteristics of, 931

—his philosophical character, 1b—on electricity, 987, 988; VIII 580, 538—his experiment on the density of the earth, I \$34, \$35—on the tensity of the easter, I \$34, \$35—on the torpedo, VIII 574; his artificial torpedo, I 988—on electracity as a chemical agent, VIII 594—on the electrical shock, 602—on the Leyden jar, 613-thermometers constructed by, XXI 222-experiments on airs, 776. (Lord John), V. 500 et seq

(MARGARET), duchess of Newcastle, VI. 355. (THOMAS), of Suffolk, VL 355-his

visit to the Ladrone islands, XVIII 269. - (Sir William), VI 355

(WILLIAM), first duke of Devonshine, VI 356. - tobacco, XXI. 294.

CAVERY, or Cauvery, river, VI. 356, 243. See Cauvery. Cavetto, in architecture, III. 468, 508.

Cavia, genus of mammalia, XIV 188. CAVIARE, VI 356-from the sturgeon of the Ooral, XIX 551. Cavitaires, entozoa, XXI 981.

CAVITE, town in the island of Luzon, VI 356.

Cavoleau (M), on the variety of French wines, XXI. 882, 883. Cavy, in zoology, XIV. 189—cape-cavy,

199-Patagonian, cranium and teeth of, XVI. 453

Cawley, his steam-engine, I, 770, XX, 575. CAWNPORE, in Hindustan, VI. 356-outbreak of the Sepoy mutiny at, XVL 305—rehef of by General Havelock, 306—atroches committed at, 305, 306. CAXAMARCA, city of Peru, VI 357.

CAXTON (William), VI 357; XVIII. 584works printed by, 535—his types, XXI. 401—his second-hand translations of the classics, IV. 710. CAYENNE, in French Guiana, VI. 357; XL

island, VI. 357; XI. 84.

pepper, VI. 357; V. 201; XVII. 404, XXI 161—adulterations of, IX. 770. See Capsicum.

CAY—CEL Cayla (Madame du), X. 181, 188. Cayley (Sir George), his flying apparatus, CAXLUS (Comte de), VI. 357—on en-caustic painting, VIII 654 Caymanas, or Cayman isles, XII. 682 Caymans, XIX 23. CAYSTER, or Caystrus, VI 358. CAZALLA DE LA SIERRA, Spanish town, Cazım (Mahommed), his description of Assam, III. 763 CAZIQUE, or Cacique, VI. 358, CAZORLA, town in Spain, VI 358 CEBES, of Thebes, VI 358 Ceblepyris, genus of birds, XVI. 751. Cebrio, genus of insects, IX. 106. Cebrionites, tribe of insects, IX 106. Cebus, genus of mammalia, XIV. 143 dentition of, XVI 455, 456 Cecidomyia, genus of insects, IX 226. CECIL (ROBERT), VI 359. - (WILLIAM), Lord Burleigh, VL 358; VIII` 711. CECILIA (St), VI 359 CECILIA (85), VI 309
Cecropium, in Athens, IV. 168.
CICROPS, VI 360, IV. 159, 192.
CEDAR, VI 360; V. 209—as timber, XXI.
275, 278—red, XIII 19—Jamaca, XII. 681-specific gravity of the wood, 89used in the houses of Nineveh, XVI. 272—Deodar cedar, XVII. 760.

—— Chilean, VI 549.

—— of Lebanon, V 209, XVII 190, 757, 760, Cederborg, Swedish novelist, XIX. 702. Cederström (Frederic), XX 857 Cedrelaceæ, nat order of plants, V 187. Cedrenus (Georgius), VI 360—on religious theatrical exhibitions, VIII 148. Ceely (Robert), proves the identity of cow-pox and small-pox, XXI 502. CEFALU, in Sicily, VI 360 CEHEGIN, Spanish town, VI. 860. CEILING, in architecture, VI 360; III 488—lathing and plastering of a, V 742-in ship-building, XX. 187. CEIMELIA, VI. 360 CEMELIOPHYLAX, VI. 360. Ceiriog, river in Denbighshire, VII. 735 Celafu, city in Sicily, XX. 243. Celant, city in Sichly, XX, 248.
Celanto, lake, VI. 360, X 317; XX, 238
Celarent, in logic, VI. 360.
Celastraceæ, nat order of plants, V. 189
—legion of, 227; XVII 627. CELASTRUS, genus of plants, VI. 360, V 189 CELATURE, VI. 360. Celaya, city in Mexico, XIV 724. CELBRIDGE, town in Kildaie, VI. 860. CELEBES, VI. 360—the Bugis of, III 749—language of, XIII 208, 218—reptiles, XIX 24, 53, 54 CELERES, Roman soldiers, VI 361; XIX. 296 Celeriac, culture of, XI. 744. CELERITY, VI 361 CELERY, VI 361—culture of, XI. 744— blanching of, V 67 Celestial mountains, XXI 227. CELESTINE, the name of five popes, VI. 361. See Pope - mineral, XV 95 CELESTINS, a religious order, VI. 361.
CELESTINS, VI. 361
CELIBACX, VI 362—few inclined to, XIV.
441—of the Catholic clergy, XVIII 336; policy of, I 527, n. 2. Chilbate, VI 362, XVIII. 336. Celidographia, VI. 362 Cell, VI 362—cells of plants, V. 65, 66, 67-of bee-combs, IV. 577, 579-cellformation, IL 784—their influence in formation of tissues, ib., 785—relation between nucleated cells and corpuscula, 785-cell tissues, XVII. 650. Cella, VI 362—a fountain in Aragon, III. 393—in architecture, 508. Cellar, VI 362—cold of, VII, 100—cellar dwellings, XVIII, 196. CELLARER, VI. 362. CELLARIUS (Christopher), VI. 363. Celle, town in Hanover, XXI 969. Centrarchus, genus of fishes, XII 277. CENTRE, VI. 372; V. 748—of effort or re-

CEL—CEN CELLINI (Benvenuto), VI 363; XIX. 863. Cellular tissue, of plants, V. 65, 66-physiology of, 67. of the human body, II 786, XVII, 650—of brutes, III 171; IX. 758. Cellulares, or cellular plants, V. 65, 178, 179, 217 Cellulose, IX. 755; V. 65, 72, II. 379, XIX 611 Celonites, genus of insects, IX 196, Celsius, his centesimal thermometer, I 759; IV. 457-on the diminution of the Baltic, 403-on the elevation of the Swedish coasts, XX. 860 CELSUS (Aurelius Cornelius), VI. 363-his anatomical knowledge, II 751—his knowledge of medicine, XIV. 454; of surgery, XX. 812—on the qualities necessary in a surgeon, 821—on insanity, XIV 527 Sainty, AIV 321 Celtae, or Celts, VI 363; II 776; V 372 et seg; IX. 387, XIII. 212; X. 727— Celtae language, V 374, XIII. 200, 212; VIII. 797; IX 393—philology, XVII 530, 538—Celtic origin of the Irish, XII 462—Celtic academy, IL 70 125 -Celtic ring-money, XVL 352, n. 1barrows, XXI 879. CELTES, VI 367, IV 512 CELTIBERIA, in Spain, VI 367-people of, XX. 457. CEMENT, VI 367—tissue in the formation of the teeth, XVI 407, 410—iron cement, X 418, n.; XIII 721; V 361.

for building, VI. 368; V. 742; XX 713, 714, 735—different kinds of, 714, 715—Parker's Roman, V. 742—Portland, 1b.—plastering with, 744—decay of, on walls, 1b—Pozzolana, XVIII 698; XX. 714
CEMENTATION, VI. 368, XVIII. 448, 444
CEMITERT, VI. 368, 22; V. 778—cemeteiles in London, XIII. 678—in Glasgow, X. 656-influence of, on health, XIV. 444—situation and management of, XIX 620—of Sidon, XX 269—Eng-hish, at Leghorn, XIII, 317. CENCI (Beatrice di), VI 368. CENEDA, town in Lombardy, VI. 369 mineral springs of, XIII. 644. CENEGILL, VI 369. Cenia, genus of mollusks, XV. 370. CENOBITE, or Comobite, VI. 369; VII. 53. CENOTAPH, VI. 369 CENSER, VI 369. CENSIO, VI 369 CENSIO, VI 369 See Censor. CENSITUS, VI, 369 See Capite Censi. CENSOR (Roman), VI, 369; XIX. d01—in China, VL 563 CENSORINUS, VI 370. CENSORS of Books, VL 370; IV. 712, XIII 357 CENSUR, VI 370.
CENSUS, VI 370—of the population of Bittain, XVIII 342—of America, 340, 341 See Population. CENT, VI. 371-a copper com, ib CENTALLO, town of Piedmont, VI 371. CENTAUR, constellation, VI. 371; IV 80 CENTAURI, or Centaurs, fabulous beings, VI. 371—in heraldry, XI. 334. Centaurus, genus of fishes, XII. 314, 207. CENTENARIUS, VI. 372 Centenes, genus of mammalia, XIV 152 Centenius Penula, defeat of, VI 298, Center. See Centre CENTESIMÆ USURÆ, VI. 372. CENTLSIMATION, VI. 372 Centetes, dentition of, XVI. 452 CENTIGRADE THERMOMETER, VL 372; IV. 457; XXI. 222. CENTILOQUIUM, VI 372 Centipedes, XV. 747, 749. CENTLIVER (Susanna), VI, 372; VIII. 165. CENTO, VI. 372 - Italian town, VI. 372. CENTORBI, VI. 372 CENTRAL AMERICA, VI 372. See America, Guatemala, &c.

- FORCES, VI. 372; VIII. 358.

CEN—CER sistance, in ships, XX. 12, 159—that used for the bridge of Orleans, 759 CENTRE OF GRAVITY, VI 385; XX. 146, 147 et seq, 546—in a ship, 16—progressive motion of, XIX, 439 - of motion, VI 385. - of a circle, X. 513. of percussion, XIX. 434—of gyration, 435—of spontaneous rotation, 439. (Canal du), X. 244. CENTRIFUGAL FORCE, VI. 385, XIV. 409couples, 409. inflorescence, V. 115 process, in sugar-making, XX, 795 pump, XII 179 Centrina, genus of fishes, XII 325 Centrinus, genus of insects, IX. 140. CENTEIPETAL FORCE, VI. 385—inverse problem of, VIII. 361. - inflorescence, V. 114. Centrus, genus of insects, IX. 200 Centruscus, genus of fishes, XII. 305, 209; XVII 117 Centrodus, genus of fossil fishes, XVII. Centrolinead (the), XVII. 446 Centrolophus, genus of fishes, XII 298. Centronoti, tribe of fishes, XII 297. Centrophorus, genus of fishes, XIL 825. Centropomus, genus of fishes, XII 275. Centropristis, genus of fishes, XII 276. Centropus, genus of birds, XVI 778. Centroscyllium, genus of fishes, XII. 325. Centrotus, genus of insects, IX. 170 Centrurophis, genus of fishes, XIL 232. Centumalus (Fulvius), defeated by Hannibal, VI 298 CENTUMVIRI, VI. 385. Centuria, division of a county, XII. 9. CENTURION, VI. 386, III. 631. CENTURY, VI. 386. --- a division of the Roman people, VL 386; XIX 297 et seq, 316. CEORLES, VI 386 CEOS, now Zea, island, VI. 386; VII. 607—coins of, XVI 374 CEPHÆLIS, genus of plants, VI. 286; V. Cephalacanthus, genus of fishes, XII. 282 Cephalaspidei, family of fossil fishes, XII Cephalaspis, genus of fossil fishes, XII. 339; XVII. 121 Cephalia, genus of insects, IX. 251. CEPHALIC, VI 386. CEPHALONIA, VI. 386; XII. 452-insur-1ection at, in 1848 and 1849, XII 456—coins of, XVI. 372—cotton, XII. 445—wines of, XXI. 886. - pine, XII. 453, a, 1. Cephalopoda, class of mollusks, XV. 390, 322—fossil, XVII. 111—extinct genera of, 115—bed of, XV. 207. Cephaloptera, genus of fishes, XII. 328. Cephalopteridæ, family of fishes, XII. 326, Cephalopterus, genus of birds, XVI. 749 Cephalotes, genus of mammalia, XIV. Cephaluna, genus of entozoa, XXI 982. Cephas, genus of insects, IX. 184. Cephren, Egyptian king, VI 526. Cephus, genus of birds, XVI 810. Cepola, genus of fishes, XII. 303 CERAL, Island, VI 386, XV. 404. Cerambycini, tribe of insects, IX. 144. Cerambyx, genus of insects, IX. 145. Ceramiaceæ, sub-order of plants, V. 218 Ceramicus, and Ceramic edifices, in ancient Athens, IV. 161—outer, 170— Agora, 162 Ceramius, genus of insects, IX. 197.
Cerasine, V. 73; IX. 756.

— mineral, XV. 105.
Cerastes, genus of serpents, XIX. 71power of abstinence, II. 52-statement by Bruce regarding, XIX. 45.
Ceratias, genus of fishes, XII. 312.
Ceratina, genus of msects, IX. 199.
CERATION, VI. 386. Ceratites, fossil mollusks, XVII. 113.

Ceratodus, genus of fossil fishes, XII.

51 CER—CER Ceratomidæ, XXL 991 CERATONIA, genus of plants, VI. 886; V. Ceratophris, genus of reptiles, XIX. 77. Ceratophyllaceæ, nat. order of plants, V. Ceratopogon, genus of insects, IX, 225 Ceratoptera, genus of fishes, XII. 328. CERBERA, genus of plants, VI 386. CERBERUS, VI 386—constellation, IV 80. Cercaria, genus of animalcules, III. 203; XXI 976, 980. Cercocebus, genus of mammalia, XIV. Cercomya, fossil mollusks, XVII. 108. Cercopis, genus of insects, IX. 170. Cercopithecus, genus of mammalia, XIV. 139-fossil, XVII 167. Cercus, genus of insects, IX. 114. CERDONIANS, ancient herefics, VI 387 CEREALIA, a festival of Ceres, VI 387 - esculent seeds of grasses, VI. 387; XVII. 630— produce of, in Ireland in 1855, XII 517—used as food, IX. 758. CEREBELLUM, VL 387, IL 818, III. 51, 52—weight of, 52—function of, XVII. 674—of brutes, III. 103. See Brain. Cerebratules, genus of entozoa, XXI 982. Cerebro-spinal diseases, XVII 700, 702 CEREBRUM, VI. 387; II 818; XVII 668. See Brain. CEREMONIAL, VI. 387-laws of the Mossic dispensation, I 469. CEREMONIES, master of the, VI. 387. CEREMONY, VI. 387. Cereopsis, genus of birds, XVI, 816. CERES, goddess, VI. 387; IV. 67, VII 373 — priests of, 616 — mysteries of, 629; XV. 753 one of the planets, VL 387-its discovery, III, 808; IV. 67.
CERET, French town, VI. 387.
Cerexochus, Egyptian deity, XI 386. Cena, genus of insects, IX. 238 Cerianthidæ, polypes, XXI. 1004.
Cerignola, Neapolitan city, VI. 387
Cerigo, island, VI. 387, XII. 454
Cengotto, island, XII. 454. Cerin, mineral, XV. 90 CERINTHIANS, heretics, VI. 387. Cerinthus, Guastic, X. 687; XVIII. 265. Cerite, mineral, XV. 91. Centhiadæ, family of mollusks, XV. 383

—fossil, XVII 110. Centhium, genus of mollusks, XV 383. CERIUM, a metal, VI 388, 488; XV. 66 CERNE-ABBAS, town in Dorset, VI. 388-abbey at, VIII 112. Cerocoma, genus of insects, IX. 184. CEROMA, VI. 388. Celomya, fossil mollusks, XVII. 108 Cerones, two Caledonian tribes, VI. 74. Ceropales, ganus of insects, IX. 195. Cerophytum, genus of insects, IX. 106. CEROXYLON ANDICOLA, genus of palms, VI. 388. CERRETO, town of Naples, VI 388. Cerro di Pasco, town in Peru, XVII. 331, 474-silver mines of, XV. 235, XVII. CERTALDO, town in Tuscany, VI. 388 Certallum, genus of insects, IX. 145. Certhia, genus of buds, XVI. 768. CERTIORARI, in law, VI. 388. Cerulin, VIII 301 CERUMEN, VI. 388. CERUSE, or white-lead, VI 388-manufacture of, XIII 301. Cerussite, mineral, XV 105. CERVANTES (Saavedra Miguel de), 388-his Don Quixote, I. 96, VI. 619; XIX 285—wounded at Lepanto, XII. 456, n. 1—dramas of, XVIII. 114—his novels, XIX. 285. Cervantite, mineral, XV. 113. Cervaro, river, XX. 238 CERVERA, Spanish town, VI 389. CERVIA, town in the Papal States, VL 889. Cervical vertebræ, III. 5, 75, 84. —— muscles, III. 38 Cervidæ, fossil, XVII. 170.

Cervus, genus of mammalia, XIV. 205fossil species, XVII. 170.

### CER-CHÆ

Cerylon, genus of insects, IX. 142. CESAER, a kind of syllogism, VI. 389 CESAER (Guiseppe), VI 389. CESAEOTT (Melchiotre), VI. 389. CESENA, town in the Papal States, VI. 389

Cessart (M. de), his plan for Cherbourg breakwater, V. 303—his plans for the Pont du Louvre, XII. 580 Cess-pools, building of, V. 735. Cessio BOXORUM, VI. 389, IV 415.

CESSIO BONORUM, VI. 389, IV 415. Cestidæ, zoophytes, XXI 1001 Cestoidea, zoophytes, XXI 979, 976, 977,

Cestraciodontei, family of fossil fishes, XII 340.

Cestracion, genus of fishes, XII. 322, 324; XVII. 117—jaw and teeth of, XVI. 424.

Cestraciontidæ, family of fishes, XII. 324; XVII. 116, 117—dental characters of, XVI. 424.

252. Cetacea, XIV 216, 237—II. 774, 775; XVII 633, 635—their bones, III. 76—

XVII 633, 635—their bones, III. 76—organs of smell, 94—eyes, 95—ears, 95—ea

Cctiosaurus, fossil reptiles, XVII 153.
Cctonia, genus of insects, IX. 127
Cctonides, family of insects, IX. 127.
Cctopsis, genus of fishes, XII 261.
Cctosia, genus of insects, IX. 207.
Cctotolites, XVII. 165
CETTE, French town, VI. 390.
CETTIS, constellation, VI. 390; IV. 80.

Cetti (Francesco), on birds, XVI 729. CETUS, constellation, VI 390; IV. 80. Ceulen (Ludolph Van), II. 560, X. 504; XX. 522.

CEUTA, fortress on the coast of Fez, VL 390—taken from the Moors, XVIIL 382.

promontory, XV. 594.
Centorhynchus, genus of insects, IX. 140.
CEVA. VI. 390.

CEVENNES, mountains, VI 390; IX 383.
CETION, VI 390; XXI 331—castes in, VI
315—cultivation of cinnamon in, 727—missions established in, XV. 271—Buddhism in, X. 724—pearl divers of, VIII.
56—pearls, XVII 356, 357—use of betel in, IV 686—diors of, V. 223; XVII.
628—height of mountains, 646—reptiles, XIX. 53, 54, 65—varieties of rice, 157—reasons for supposing it to have been Eastern Tarshish, XXI, 27, 28—cultivation of tea in, 81—weights and measures, \$10.

Ceyx, genus of birds, XVI. 778. Chabannes (Marquis de), his hot-water apparatus, XIX. 614 Chabasie, optical properties of, XVI. 542.

Chabaste, mineral, XV. 76.
Chabast, town in France, VI 401.
Chabatas, Athenian general, VI. 401.

Charmas, Athenian general, VI. 401. Chabrier (J.), his work on the flight of insects, IX. 15. Chaca, genus of fishes, XII. 263. Chaco (Gran), plain in La Plata, XVII.

Chaco (Gran), plain in La Plata, XVII. 777. Chadwick (Mr), on the allowance to the

poor, XVIII 306, n. 1—on the rate of wages in Lancashire, XXI. 680. Chemichthys, genus of fishes, XII. 306,

Chæremon's lost work on hieroglyphics, XI. 411.

Chærephon, XX. 391. Chæroneia, in Bœotis

CHERONEIA, in Bosotia, VI. 401—battle of, XIII. 765; consequences of, XXI 179 Cheropotamus, fossil mammal, XVII 165.

Charops, genus of fishes, XII. 267.
Chætites, fossil corals, XVII. 97.
Chætodon, genus of fishes, XII. 301, 302.
Chætodontidæ, or Chætodonts, family of fishes, XII. 299, 302—fossil, 444.

# CHA-CHA

Chetopterus, genus of annelides, XI. 300.
——genus of fishes, XII. 288.
Chafferx, VI 401
Chaff, as manute, II. 406.
Chaff-cutters, II. 283.
CHaffench, VI. 401, XVI 761
Chafin (Rev William), on fox hounds,

XII 43. CHAGRES, river and town, VI. 401; II 712; XVII 226 Chahorra, volcano, VI. 165

Bridges.
book, in surveying, XXL 348.

rigging, XX. 23.
seot, VI. 401.
Chair, for railways, XV

Chair, for railways, XVIII. 756, 757, 759. CHAISE, VI. 401 Chaka, Kafir chief, XIII. 36; XV. 803. Chakoor, or fire-eater, bird, XVI. 143.

Chakoor, or fire-eater, bird, XVI. 143. Chalaza, in botany, V. 133, 139. CHALAZE, VI. 401.

genus of insects, IX. 192
Chalco, in Mexico, XIV 722, 723.
CHALCOCONDYLES, Byzantine historian,

VI. 401. Chalcolite, mineral, XV. 104. Chalcophyllite, mineral, XV. 103.

Chalcopyrite, XV. 116.
Chalcotrichite, mineral, XV. 112.
Chaldare language, in the Scriptures, XIX.
833, 834—Targums, 838; XXI. 23

833, 834—Targums, 838; XXI. 23 CHALDEA, VI 401; IV 345— mothercountry of diviners, VIII. 54— monatchy, XV. 412.

Chaldeans—their astronomy, III. 782—day, VI. 75—their dial, VII. 772—mythology, XV. 763—sculpture, XIX. 846
CHALDEE LANGUAGE, VI. 401; XIII. 200, 209—alphabet, II. 614—portions of the Bible in the, IV 694.

PARAPHRASE, VI. 401.
CHALDRON, a dry measure, VI. 401.
CHALET, VI. 401.
Chaletts, Pay of YVI. 169

Chalcus, Bay of, XVI. 162. CHALICE, VI. 401. Challite, mineral, XV. 76.

CHAIK, VI. 401; XV 92, 146, 210, 211—black, VI. 402; XV. 83—its resistance to cushing, XX. 718—specific gravity of, XII. 88—composed chiefly of animalcules, XVII. 588—as a manure, II. 303—drawing in, VIII. 171; engraving of chalk drawings, 804—French and red, VI 402—chalk-marl, XV. 210—chalk fiints in Scotland, XIX. 793.

FORMATION, VI. 402; XV. 210—fishes of, XII. 349, 350 et seq.; XVII. 640—fossil sponges of, 98—Bryozoa of, 98—in Russia, XIX. 518; Spain, XX. 485.

Challis (Prof), his results of theory respecting waves, XII. 74—his researches in hydrodynamics, 76—on Laplace and Poisson's theories of capillary attraction, 101—his search for the planet Neptune, III. 817, IV 93; I. 830 and n—on light, XVI. 547

GEORGE, AVI. 321

CHAIMERS (Alex.), bographer, VI. 402.

(GEORGE), VI. 402, 191—on the agriculture of Scotland, II. 251—on the Mosquito territory, XV. 664—his estimate of the corn raised and consumed in the United Kingdom, VII. 395—on the history of Caledonia, XIX. 741 et seq.

(Dr THOMAS), VI. 403-his venera-

# CHA-CHA

tion for Prof. Robison, I. 873, n 1—on the wonders displayed by the microscope, III 197—on Butlen's Analogy, VI. 33—on moral philosophy, XV 535, 538—his exertions for church extension, XVIII. 498—veto proposed by, 494—his Bridgewater treatise, V. 364—on the character of Dr Andrew Thomson, XXI. 233

CHALONER (Sir Thomas), VI. 407.

(Sir Thomas, the younger), VI. 407.

Chalons-sur-Marne, VI 407.
CHALONS-SUR-MARNE, VI 407.
CHALONS-SUR-SAONE, VI 407
CHALUS, town in France, VI 407.
Chalybeus, genus of birds, XVI 748.
CHALYBEATE, VI 408—waters, XV. 38, 39
—in Clare, VI. 753.

Chalybite, XV. 99.
Cham, of Tartary, VI 408
Chama, genus of mollusks, XV. 349, 347
—fossil, XVII. 107.

CHAMADE, in war, VI. 408 Chamælauciaceæ, nat order of plants, V. 192

Chamæleonidæ, family of reptiles, XIX. 37 See Cameleon. CHAMAS (St), town of France, VI 408. Chamavi, tribe of Franks, VII 306. CHAMBER, VI. 408.

CHAMBER, VI. 408—Lord, XI. 775 vice, ib CHAMBERLAYNE (Edward), VI. 408.

—— (JOHN), VI 408. CHALIBERS (DAVID), VI 408

CHAMBERS (DEVIG), VI. 408

(Dr), on corpulence, VII. 414.

(EPHRAIM), VI 408

(Sir William), VI. 408—on Greek and Roman architecture, III 448, 456 —his low estimate of the principles of Vitruvius, 451—his merits as an architect, 455—his depreciation of Greek architecture, 456—on Chinese gardens, VI. 593.

Chambertin, wine, XXI. 883. CHAMBERY, in Italy, VI. 408; XIX. 633, 640.

CHAMBORD, chateau in France, VI. 409. CHAMBLEON, VI 409. See Cameleon. Chamfer, in architecture, III. 508. CHAMFRAIN, VI 409

Chamidæ, family of mollusks, XV. 349 CHAMIER (Daniel), VI. 409. CHAMISSO (Adelbert von), VI 409; XVI. 123—on the salpian mollusks, XV. 335.

123—on the sapian moliusis, A.V. 33.

Chamois, VI. 409, XIV. 211—among the

Alps, II 626—hunters of Glarus, X. 644
—confined to the Alps, XVII. 630.
——leather, XIII 305, 210.

CHAMOMILE, VI. 409, V 197; XI 745—

CHAMOMILE, VI. 409, V 197; XI 745 used in dyeing, VIII. 297—oil of, XVI. 496.

CHAMOND (St), town in France, VI 409. Chamostrea, genus of mollusks, XV. 350. CHAMOUNY, or Chamonix, VI 409—valley of, XV. 509, glaciers descending into, ib.

CHAMPAIN, in heroldry, VI. 409, XI. 325. Champanbert, battle of, X. 167. CHAMPION, VI. 409.

of the king, VI. 409.

his attempt on the life of Louis
Philippe, X. 218.

CHAMPLAIN, lake, VI. 409; XVI. 214; XXI. 550—military operations near, in 1813, V 617—canals and railways connected with, VI. 155; XXI. 550—geology of, XVI 215.

Champneuf (F. G.), his work on insects, IX. 12.

CHAMPOLITON (Jean François le Jenne), VI. 410; XXI. 964—on Egyptian architecture, III 435, 438—his method of interpreting ancient Egyptian characters, XI. 377—his merits and discoveries, 408—his system of hieroglyphics, VIII. 196—his birthplace, IX. 546—his Grammar and Dictionary of

# CHA-CHA

Hieroglyphics, XI 431—on the Egyptian "Book of the Dead," XVII 263 Champre, on the chemical effects of voltace electricity, XXI, 628. Chanarcillo, mines of, VI 548. Chanary, town of Peru, VI 410.

CHANCE, IOWN of Fern, VI 410. CHANCE, VI 410, XVIII. 591—Instory of the doctrine of, I. 819—its chief applications, ib. See Probability.

cations, ib. See Probability.
—— (Messrs), their glass establishment near Birmingham, IV 732; X. 664.
CHANGEL, VI 410.

CHANCELLOR, VI 410—in Ireland and Scotland, 411—of a cathedral, ib—of the Duchy of Lancaster, ib—of the exchequer, 412—of the order of the garter, ib—of a university, ib.; XXI. 446—of Oxford, 456—Cambridge, 462—London University, 466—St Andrews, 475—Marischal College, Aberdeen, 481—Edinburgh, 483—Dublin, 489.
CHANCERY, VI. 412, 411—inns of, XII. 384.

CHANCERY, VI. 412, 411—inns of, XII. 384. CHANDERNAGORE, French settlement in Bengal, VI. 412, XI. 484.

— (DR SANUEL), VI. 413.
Chandos (Si. John), VI. 621.
CHANG CHAU, Chinese town, VI. 413.
Channel Islands, XII 730, 731; VIII. 792
vessels belonging to, 742—cattle of, II.
342; VII. 621—consumption of tea in,
XXI. 91

of rivers, XIX. 200, 201.
CHANNING (William Ellery), VI 413—on the credibility of the Scriptures, XIX.

Channock Chase, XX. 529.
Channomuræna, genus of fishes, XII. 232.
Chanos, genus of fishes, XII. 254.

Chanos, genus of fishes, XII. 254. CHANT, VI 415. CHANTIBAN, town of Siam, VI. 415.

CHANTIBAN, town of Siam, VI. 415. CHANTILLY, in France, VI. 415. CHANTIEV (Sir Francis), VI 415—character of his sculpture, XIX. 868. CHANTRY, VI. 415

CHANTRY, VI. 415 Chaones, in Epirus, IX. 277. CHAOS, VI. 415. Chapala, lake, XIV 715.

Chapala, lake, XIV 715.
Chapala, lake, XIV 715.
Chapal, in heraldry, VI. 416, 205; XI. 336.
Chappl, VI. 416—knights of the, ib—

Chapels of ease, in the Scotch kirk, XVIII. 493.

EN-LA-FRITH, in Delbyshire, VI.

— HILL, in America, VI. 416.
CHAPELAIN (Jean), VI. 416.
Chapelle (C. E. L.), I 108 and n. 1.
— ardente, VI. 330; XIV. 339,
— or stove-grate, XVIII. 78

OTAPERON, VI. 416, 205.
Chapingo, in Mexico, XIV 723.
CHAPLAIN, VI. 416 — chaplain's of the

CHAPLAIN, VI. 416—chaplain's of the pope, ib.—pension to widows of regimental chaplains, VII. 203—naval, XVI. 105; pay of, 110, 114—of ships, XX. 28. CHAPLET, VI. 416.

water-raising machine, XII. 188.

water-raising machine, XII. 188
CHAPMAN (George), VI. 416.

—— (William), on dry 10t, VIII 207, 209, 211, 212—on the durability and strength of ropes, XIX. 402, 403—his rope-machinery, 407, 408.

——— (Mi), his estimate of the value of the woollen and worsted manufactures in Great Britain, XXL 918

onigm of the name, VI. 600 CHAPPE (Claude), VI. 416 D'AUTEROCHE (Jean), VI. 416.

—— D'AUTEROCHE (Jean), VI. 416.
CHAPTAL (Jean Antoine Claude), VI. 416.
—his process for making alum, II. 635,
641—on dyeing nankeen yellow, VIII.
300—his mode of whitening the leaves
of books, IV. 771—on the price of wheat
in France, VII. 403.

CHAPTER, VI. 417. CHAPU, Chinese town, VI. 417. Chapuis (M. F.), his work on insects, IX.

Char, fish. See Chart.
Characez, nat. order of plants, V. 217—
—reproductive organs of, 148.

# CHA-CHA

Characinidæ, family of fishes, XII 245 Character, VI 417—literal characters, 1b.—particular—universal, 1b — of abbreviation, 419, IL 21-numeral, VI 418-Chinese characters, 572-essential, in natural history, V 175
—— in poetry, VI 420—difficulty of esti-

mating national, IV 210—the phrenological art of reading character, XVII

Charadrus, genus of birds, XVI. 797. Charade, VI 420

Charax, genus of fishes, XII 287.

CHARCOAL, VI. 421, 471-electricity developed in the combustion of, VIII 567its use in filters, IX. 580, 581-its power of sweetening tainted meat, 767-its use with the blow-pipe, IV. 791-for gunpowder, XI. 153; proportions of, in gunpowder, 151-used in iron manufacture, XIL 539, 542-as fuel, X. 318; for laboratories, 360—fusion of, by voltaic electricity, XXI 626. See Carbon. CHARD, VI 421.

CHARDIN (Sir John), traveller, VI. 421. CHARENTE, in France, VI 421. CHARENTE-INFERIEURE, VI 422

CHARENTON-LE-PONT, town in France, VI. 422

CHARES, of Rhodes, statuary, VI. 422—colossus of Rhodes executed by, XIX.

CHARGE, in heraldry, VI. 422; XI. 327, 330.

Charger, XI 656. Charicles, XX. 399.

Charing-Cross, London, XIII. 659, 660 CHARIOT, VI. 422—triumphal, ib

- races, X. 398 CHARISIUS, Surname of Jupiter, VI. 423

CHARISTIA, Roman festival, VI. 423. CHARISTICARIES, VI 423

Charitable Corporation, V 457. - Establishments in England, VIII. 748. See London, Dublin, &c. Charité (La), town of France, VI 423 Charités, the three Graces, VI 423, X

CHARITON, Greek writer, VI 423.
CHARITY, VI 423; XVII. 502, n—establishments for purposes of, in England, VIII. 748. See Alms, Mendicants, Men-

dicancy. - (Brothers and Sisters of), VI. 423 Спавкоv, or Kharkov, in Russia, VL 423; XIII 76

CHARLATAN, VI. 423.

CHARLEMAGNE, VI. 423-reign of, X. 7dates of his comonation and death, VI 667-his proceedings in Germany, X. 578—academy founded by, II. 61— Lombardy conquered by, XIII. 643, XII. 643—his books against image-wor-ship, 356—the Jews protected by, 777 iron crown of, X. 136 and n. 1couragement of learning, XIII. 388; V. 14; XIV 457; XXI 444; and of art. XVII. 60-homilarum of, XI 606 his wars with the Saxons, X. 7, 8, 9; XIX. 685-his invasion of Spain, XX. 462.

Charlemont (Lord), his account of Hume in Paris, XII 4.

- (Earl of), XII. 496.

CHARLEROI, in Belglum, VI. 423; XXL 717, 718.

CHARLES MARTEL, VI. 424; X. 6.

- le Gros, VI. 424. the Simple, X. 11.

- the Fair, X. 15. - the Prudent, X. 20.

I. of England, VI 424-his matrimonial visit to Spain, while Prince of Wales, V. 387—his reign, 389—his charactor, ib - his wars with the parliament, 402 et seq -throws himself on the Scottish army at Newark, 408-surrendered to the English, ib .- his trial, 411—execution, 412—influence of the civil war of 1640 on the intellectual character of the nation, I. 48-archery in his reign, III. 425—his fondness for chess, VI. 528—his visits to Edinburgh,

# CHA-CHA

VIII. 392-his Irish policy, XII. 480his navy, XVI 92, XX. 130-a patron of Shakspeare, 73 - an accomplished prince, ib, n-his encouragement of the theatre, XXI 169—foreign weavers exiled by, 780

Charles I. of Spain (V. of Germany), his reign, XX. 468 - his abdication and character, 469. See Charles V

II of England, VI. 424-his expedition to Scotland, V. 413-his coronation at Scone, 414—his invasion of England, and defeat at Worcester, 415 escape to France, 1b -his restoration, 420—history of his reign, ib.—his death and character, 483—Robert Barclay's dedication to, IV. 442—his treatment of Colonel Blood, 789—his regulations as to the coinage, VII 76, 78—act regulating the exportation of corn, 377 state of the drama, VIII. 161; its gross immorality, 162—Edinburgh in the reign of, 392—duelling, 231—his policy towards Ireland, XII. 486—his navy, XVI 93; XX. 130—specimen of news papers in the reign of, XVI 183. - II of Navarie, XX 464.

II of Spain, XX, 470 III of Spain, XX. 471.

- IV. of Spain, XX. 471. V., emperor of Germany, VI. 424his expedition against Algiers, II 568 -dominions of, IV. 302-his wars in the Netherlands, III. 636; and policy towards that country, XI 562-his wars m Italy, XII. 651-Robertson's History of, XIX. 231; Stirling's, ib., n. 2—his Spanish reign, XX 468—abdication and character, 469—his patronage of Titian,

V., king of France, X. 20—his hbrary, V. 12—Paris improved by, XVII. 278

VI. of France, X. 20.

VII of France, X. 23established the first standing army, III 636.

VIII of France, X. 28-his army, 636-his invasion of Italy, XII 651. IX. of France, X. 32.

IX. of Sweden, XX. 847.

X. of France, X. 189—departure from France, 202—death, 212—cha-racter, 202—law for his banishment, and that of his descendants and relations, 204-state of Paris under, XVII.

X. of Sweden, XX. 851

- XI of Sweden, XX. 852 - XII of Sweden, VI 424, VII 741 —his reign, XX. 852—his army, III 637—his designs against George I, V 455-his fondness for chess, VI. 538 wars with the Russians, XIX. 477 et

XIII. of Sweden, XX. 859. XIV. and XV., kings of Sweden, XX 860

(Duke of Burgundy), XI. 561—his invasion of Switzerland, XX. 885.

Edward Stuart, his expedition to Scotland, V 460—escape to France, 461 his visit to Dumfries, VIII 239—Edun-burgh taken by, 393; V. 460

Gustavus, king of Sweden, VII.

(Mons.), his hydrogen gas balloons, II. 175, 176 - his observation of the thermometer and barometer, VI. 780. of Anjou, king of Sicily, X. 13; XX. 258

- of Bourbon, king of Sicily, XX. 260, 264

CHARLES'S WAIN, seven stars in Ursa Major, VI. 425. CHARLESTON, in South Carolina, VI. 425.

CHARLESTOWN, in Massachusetts, VI. 425 - in Fife, mining operations at, IV. 756.

CHARLETON (Walter), VI. 425-his improvements in anatomy, IL 762. CHARLEVILLE, in France, VL 425. - in Ireland, VL 425

#### CHA—CHA

CHARLEVOIX (Pierre François Xavier de), Jesuit missionary, VI. 425

Charlotte (Princess), grant to her and her husband, V. 621—her death, 623— church services in Scotland on the death of, XXL 232.

CHARLOTTENBURG, in Brandenburg, VI.

CHARLOTTESVILLE, in Virginia, VI. 426. CHARLOTTE-TOWN, in Prince Edward's island, VI. 426; XVIII. 578. - in Dominica, XIX. 423.

CHARM, VI. 426 — modern Egyptian charms, VIII 447

CHARNEL, or Charnel-house, VI. 426. Charnock, on the lustory of marine architecture, XX. 117, 123 - on the ship Henri Grace à Dieu, 125—his account of a ship built by James IV of Scotland, 126 -on the dimensions of French ships, 133

CHAROLLES, town in France, VI. 426. CHARON, VI. 426; XX. 785. CHARONDAS, VI 426.

Charons, a Hindu sect, XI. 91, 92 CHARPENTIER (Flançois), VI. 426

- (Toussaint de), his works on insects, IX. 13, 18.

- (M), on the descent of glaciers X. 637, 638. Charr, VI. 426; XII. 241, 439—angling

for, III. 158 Charrhæ, battle of, XIX. 325. See Carr-

CHARRON (Pierre), VI 426—relations be-tween him and Montaigne, I 52, 53 on the power of custom, XV. 543. Charruas, American people, II. 677

CHART, VI. 426, XVI 3, 27—plane — Mercator's, ib; X 496—globular, VI. 426 - hydrographic - selenographic topographic, ib - wreck chart, XIII -of the variation of the needle XIV. 49; I. 990—recent improvements CHARTA, VI. 426

CHARTER, MAGNA CHARTA, VI. 426granted by King John, VIII. 677 - PARTY, VI. 428-charters of com

munity, 736

Chartelhouse, London, VI 428; XIII, 667. CHARTISTS, VI. 428; IV. 671—insurrection of the, V. 667—their monster petition, 1b,-influence of Cobbett's Weekly Register on, XVI. 189. CHARTOPHYLAX, VI. 428.

CHARTRES, in France, VI. 428 CHARTREUSE, LA GRANDE, VI. 428; XII.

CHARTULARY, VI. 428 CHARYBDIS, VI. 429; XX. 244. CHASE, or Chace, VI. 429; XX. 210, n. See Shooting. Chase-mortise in carpentry, V. 748. Chasewater steam-engine, XX, 575.

Chasidæans, Jews, III. 776. Chasing, or enchasing, VIII 654. Chasmodes, genus of fishes, XII. 309. Chasmodia, genus of insects, IX. 123

Chassé (General), his defence of the citadel of Antwerp in 1830, IV 606; and in 1832, 609; X. 208, IX 826.

Chasseloup on fortification, IX 833. Chassot (Cail de Floiencourt), on life assmance, XII. 400.

CHASTELLET (Madame du), VI. 429—notice of her writings, I 185-86—on the force of moving bodies, 655, 656, n. 1-her connection with Voltaire, XXI. 658. CHASTITY, VI. 429 - duty of, XV. 568.

Chat Moss, XIII. 177-reclamation of, II. 361-railway across, XVIII. 760. Chateau Margaux, wine, XXI. 883. CHATEAU-GONTIER, in France, VI. 430. Chateau-Neuf, disaster at, from lightning,

See Rape.

VIII. 586. CHATEAU-THIERRY, in France, VI. 430. CHATEAUBRIAND (François Auguste, Vi-comte de), VI. 429; X. 184, 185, 191, 193, 194 et seq — his dismissal from office in 1824, 187—on the scenery of Greece, XL 18—passage in the Mer-

# CHA-CHE

cure written by, XVI. 197-his novels, XIX. 289

CHATEAUBRIANT, French town, VI. 429. CHATEAUDUN, town in France, VI. 430. CHATEAUROUX, in France, VI. 430. CHATELLERAULT, in France, VI 430. Châtelet (Madame du) See Chastellet. Chatham, VI. 430, XIII. 65—dockyard

at, VIII. 81-population of, XIII. 67convict labour at, XVIII 583.

- ISLANDS, VI. 430; IV. 268. - (William, Earl of). See Pitt. (J., second Earl of), his conduct of the Walcheren expedition, V. 607 Chatı, feline animal, XIV. 170. CHATILLON-SUR-SEINE, VI. 430-congress

Chatcessus, genus of fishes, XII. 237. CHATRE (La), VI. 430. CHATSWORTH, seat of the Duke of Devon-

shire, in Derby, VI. 430; VII. 756—founded by Sir William Cavendish, VI. 356.

CHATTACOCHEE, North American river,

Chattelaine, his engravings, VIII. 808. CHATTELS, VI. 431.

Chatterers, birds, XVI. 850.

CHATTERTON (Thomas), poet, VI. 431— Bryant's work on his Rowley's Poems, V. 705—place where he pretended they were found, 370—his poetry, XVIII 124—publication of Rowley's Poems, XXL 410—Warton on his Poems, 736.

CHAUCER (Geoffrey), VI 432—compared with Barbour, IV. 436—his description of an archer, III. 427- obscenity of his Canterbury Tales, VI. 610—his language, VIII. 795; understood by the descendants of an English colony in Wexford, XXI 847-on May-day, XIV. 367-his intimacy with Gower, X. 739his acquaintance with Petrarca and Boccacio, XVII. 500-poetry of, XVIII.

CHAUD-MELLE, in Scots law, VI. 434. CHAUDES AIGUES, in France, VI. 434. Chaudoir (Max. de), his entomological works, IX. 19.

Chauhac (Guy de), his medical writings, XIV. 458; XX. 817.

Chaulieu, poetry of, XVIII, 117. Chauliodes, genus of insects, IX 179. Chauliodus, genus of fishes, XII. 247. Chaulnes (Duke de), on the colours of concave mirrors, XVI. 619. CHAUMONT, town in France, VI. 435; XIV. 312.

- gypsum quarries of, XV. 165. Chaunax, genus of fishes, XIL 312. Chauna, genus of birds, XVI. 807. CHAUNT, town in France, VL 485. Chausse-trapes, IX. 799.

Chaussier (M), on the skin, II. 834-on medical jurisprudence, XIV. 424. Chauvehn (Mons), ambassador, V. 546; X. 76; XXI II.

Chauvet, blind organist, IV. 781. CHAUVIN (Stephen), VI. 435 CHAUX-DE-FOND (La), Swiss town, VI. 435

CHAVES, Portuguese town, VI. 435 Chaworth (Mr), killed in a duel with Lord By1on in 1765, VIII 232.

CHAZELLES (Jean Mathieu de), VI. 435. CHEADLE, town in Staffordshire, VI. 435. CHECKY, in heraldry, VL 435; XI. 328, 326.

Cheddar-checse, XX. 410 - method of making, VII. 625; introduced into Scotland. XXI. 864.

CHEDUBA, island in the Bay of Bengal, VI. 435.

Chedufeau (M.), his discoveries in Arabia, III. 355.

Cheek-bone, human, III, 22, Cheeronjee oil, XVI. 496.

CHEESE, VI. 435, 523-dairles, VII. 624different kinds of British, 625-imports of, VIII. 734—of rein-deer's milk, XIII. 239—Cheshire, VI. 529—green-cheese of Glarus, X. 644—Gloucester, 680—

#### CHE—CHE

Gouda, 730-Dunlop, IV. 333-Stilton, XIII. 320-Parmesan, 651-Gruyère, X. 304, 305—occasionally poisonous, IX. 761—in Holland, XI 582; quantity exported from, 585-inferiority of Irish, XII 518-Cheddar (see Cheddar).

Cheese mite, III 388 Chehalis, river, XXI 766, Chellinus, genus of fishes, XII 267, Chello, genus of fishes, XII 267 Cheilobranchus, genus of fishes, XII 229 Cheulodactylus, genus of fishes, XII 278 Chellodipterus, genus of fishes, XII 275. Cheilostomata, polypes, XXI 1002 Chellotrema, genus of fishes, XII. 286. Cherracanthus, genus of fossil fishes, XII. 334 . XVII. 123.

Cherrolepis, genus of fossil fishes, XII 334, XVII 123

Cheiromys, genus of mammalia, XIV, 178
—dentition of, XVI. 455. Cherronectes, genus of fishes, XII 206,

310, 311. Cheiroptera, mammalia, XIV. 146-odontology of, XVI, 452

CHEIROTHERIUM, fossil animal, VI 436; XVII. 138—foot-prints of, 140. CHEKE (Sir John), VI. 435. CHE-KIANG, in China, VI. 436

CHELIDONIAS, VI 436. Chelifer, genus of arachnides, III. 386 Chelmon, genus of fishes, XII 300, 302. CHILLMSFORD, town in Essex, VI 436. Chelone, fossil, XVII, 153.

Chelonia, genus of insects, IX. 214. genus of reptiles, XIX. 16—number known, 51—chief works on, 21, n. 2fossil, XVII 153-geographical distributton of, 154

Chelonichthys, genus of fossil fishes, XII. 337

Chelonus, genus of insects, IX. 188 Chelostoma, genus of insects, IX 199 CHELSEA, VI. 436 — suspension-bridge, XIII 676-its porcelain, XVIII. 437, 438-botanic garden, XX. 334 and n - hospital, XIII 672

CHELTENHAM, in Gloucestershire, VI 436 X 682 — bridge, XII. 606 — mineral waters of, XV 39—inferior colite near, 207

Chelydra, fossil chelonian, XVII, 153 Chelyosoma, genus of mollusks, XV 334 Chelys, genus of reptiles, XIX. 21.

CHEMISE, in fortification, VI 436. CHEMISTRY, VI 437-progress of, I. 800, 801-vague and extravagant views of the first experimenters in, 569 - its beneficial application to pharmacy, 570
— discoveries of Van Helmont and
Roger Bacon, 1b.—chemical constitution of animal bodies, II. 778 et seq .- Bayen's analyses, IV. 523—use of the blow-pipe in, 791—Mr Cavendish's influence in promoting discovery m, VI 351; I. 929 -his experiments on factitious air, VI. 351; and on air, 352, 353-crystallization, VII. 545—knowledge of, in Egypt, VIII. 442—application of electricity to, 530; XXL 637—chemical changes produced by electricity on inorganic bodies, VIII. 590—electricity of chemical action, 566-filtration in, IX. 582-furnaces used in, X. 357-heat from chemical action, XJ. 275—chemical effects of light, XIII. 459; I. 921—chemical equivalents, 938—chemical theory of galvanism, 964, 968, 978—heat considered as a branch of, 925-Dalton's atomic theory, 935, 936-its importance to the progress of chemistry, 937, see Atomic Theory-use of chemical analysis in medicine, XIV. 464—chemical properties of minerals, XV, 60-influence of their chemical composition on their external characters, 62-chemical reaction of mmerals, 63-chemical 10cks, 129, 142 -influence of magnetism on chemical action, XIV. 41—chemical effects of the solar spectrum, XVI. 594—foundation of modern, XIV. 460-physiological, XVII. 654—chemical and electrical forces identical, I. 978—chemical theory

# CHE-CHE

of combination and oxidation, 932evidence in cases of poisoning, XVIII. 132-antidotes to poison, 134-chemical effects of voltaic electricity, XXI. 628; of thermo-electricity, 652-chemical application of electricity, 637. See Cold, Heat, Electro-chemistry, Oxygen, &c., Dalton, Davy, &c.

CHEMISTRY, ORGANIC, VI 501-of vegetation. V 94-chemical changes during germination, 165-of tea, XXI 82. See Agricultural Chemistry.

Chemitypy, XVIII. 554.
CHEMNITZ (Martin), VI. 525—
a town of Saxony, VI 525—its manufactures, XIX. 684

CHEMOSH, VI 525. CHEMOSIS, inflammation of the eves. VI.

Chenalopex, genus of birds, XVI 816 CHENAUB, or Chenab, river in the Pun-jab, VI. 525; XVIII 687, 688.

CHENEIR (Marie Joseph de), VI. 526 Chenendopora, fossil sponges, XVII 93. Chennium, genus of insects, IX. 153 Chenopodiaceæ, nat order of plants, V.

Chenu (J. C), his work on insects, IX. 19. CHEOPS, Egyptian king, VI. 526-pyra-mid of, III 437, VIII. 454

Chepman (Walter), printer, XVIII. 538 CHEPSTOW, in Monmouthshire, VI 526, XV. 497, 498, XXI 948-castle, XV. 499—iron bridge at, XII 601 Chequers, origin of, as a sign, III 324.

CHER, in France, VI 526 CHERASCO, town in Piedmont, VI. 526.

CHERBOURG, in France, VI. 526—break-water of, V. 302, XI 219—dock-yard established by Bonaparte, V 305, X.

CHERIBON, town in Java, VI. 527. Cherokees, II 680, 692; X. 564, 565, Cheronaa. See Charoneia.

Cherons, XI. 466.

Cheroots, XXI. 295.
CHERRY, VI. 527; V. 191; XVII. 763—
in Hertfordshire, XI. 859—specific gravity of the wood, XII 89—culture and varieties of, XI 712—cherry-house, 729—introduced into Europe by Lucullus, XIII 715—gum of the cherry-tree, XI.

- Laurel, V. 191. red, colour in dyeing, VIII 291.
CHERSO, Island, VI 527 CHLRSON, VI 527. See Kherson.

CHERSONESUS, VI 527.

- ancient city, VII 505, - Cimbrica, VI 723 - Taurica, VII. 527. See Crimea. Chert, mineral, XV. 69, 147 CHERTSEY, town in Suriey, VI. 527. CHERUB, VI. 527

CHERUBINI (M L C Z Salvador), VI 527, XV. 700-on fifths in music, 724-on

the fugue, 735, 736 CHERUSCI, ancient German tribe, VI. 528, X. 572, 576.

Chervil, plant, XI. 745.

Cherwell, river, XVII. 36, Chesapeake Bay, VI. 528; XIV. 330, 331 CHESELDEN (William), VI. 528; XII. 26

XX. 819—his anatomical labours, II 764, 766—on the vision of a patient couched for cataract, XIV. 558, n. 1. CHESHAM, town in Bucks, VI. 528.

CHESHIRE, VI. 528-breed of pigs, II 355 —cheese, VII 625—constabulary act of 1829, XVIII, 199—salt mines in, XV or 1829, AVIII, 199—sat mines in, AV 246; XIX 582 et seg.—population and value of property, VIII. 754.
Chesney (Colonel), his expedition up the Euphrates, IX. 376—on artillery, III. 629, 629.

683, 684,

Curss, VI. 530-Kempelen's automaton chess-player, III. 138. Chest. See Thorax.

- (water in the). See Hydrothorax. CHESTER, VI. 538-mysterics performed at, VIII. 143-arms of, XI. 328-Chester and Birkenhead Railway, IV. 728.

# CHE-CHI

CHESTER-LE-STREET, VI 539; VIII. 267. CHESTNUT, VI. 539, XVI. 395—culture of the, XI. 717, in France, X. 247, 248
—— water, V 192—horse, 186, XVII 759, 762—sweet, 758—chestnut-timber,

XXI 274, 278 Chethams' library, Manchester, XIII 406 Chetopoda, genus of annelides, XI, 291,

2 1 Chetore, in Hindustan, VI 601 CHCVAL-DE-FRISE, VI 539; IX 798.

CHCVALIER, VI. 539. (M), on compound achievatie lenses, XIV 777.

CHEVERON, in heraldry, VI 539, XI 328. CHEVIOT Hills, VI 539; XVI 299-sheep, II 346, 351, north of Scotland chiefly stocked with Cheviots, 350, in Sutherland, XX. 842—height of, XVII. 643 geology of, XIX. 790, 454

CHEVREAU (Urban), VI 539—his table-talk, II 738

Chevreul (M.), his analysis of fat, II 788, VI 170-10dine discovered by, in the crust of the crustacea, VII 537-on dyestuffs, VIII 287 et seq —on saponification, XX. 367—on zoophytes, XXL 977, n 1

on the arrangement of coloured flowers, V 152.

Chevrolat (A.), his works on insects, IX. 19. Chevy-chase, VI 429, 539, XX 212 Cheyletus, genus of arachnides, III. 388 CHEINE (Dr George), VI 539

Cheyt Sing, XI. 495 Chiabrera (Gabriele), Italian poet, VI 539; X. 453—merris of his poetry, XVIII 112

Chiaje (Delle), on zoophytes, XXI. 983, 985.

Chiampa, VII. 48. CHIAPA, or Chiapas, Mexican state, VI. 539; XIV. 726, 718.

- DE LOS INDOS, town in Mexico, VI 539

CHIARAMONTE, town in Sicily, VI 540. CHIARI, town in Lombardy, VI. 540. (GIUSEPPE), VI 540 CHIAROSCURO, VI 540, 758-

– printing in, 273—engraving, VIII 799, 800—drawing, 173—in wood-engraving, XXI. 903.

Chiastolite, mineral, XV. 86, CHIAUSI, VI 540 CHIAVARI, Italian town, VI 540. CHIAVENNA, town in Lombardy, VI 540 CHICAGO, city of Illinois, VI 540; XIL 362, 363,

CHICANE, or Chicanery, VI 540 Chicha, Peruvian liquor, XVII 472. Chichemecas, Mexican people, XIV. 698 Chichen, ruins of, II, 697. CHICHESTER, town in Sussex, VL 540;

XX, 838, 839 Chichimeks, II 683. Chickara, in zoology, XIV. 210 CHICKEN-POX, VI. 540; XXI 501 Chickweed, V. 184, 116 CHICLANA, town of Spain, VI. 541.

Chicorx, or Sucory, VI. 540; II 329, 335; V. 150, 197, IX. 761—adultera-tions of, 769—culture of, XI 744—laws concerning the sale of, IL 154.

CHIEF, VI. 541-in heraldry, ib., XI 327. CHIEFTAIN, VI. 541

CHIERI, Italian town, VI. 541, CHIETI, city of Naples, VI 541 CHIGI (Fabio), Pope Alexander VII., VI.

CIIIHUAHUA, state and town in Mexico, VI 541, XIV 727, 718. CHILBLAIN, VI 541.

Child (Sir Josiah), on interest, XII. 429on political economy, XVIII. 215, 216. Child-murder, XIV. 428. Childebert, X. 4 et seg.

Childeric, X. 2. CHILDERMAS-DAY, VI. 541. Childers, race-horse, XI. 635, 639, 643. Childhood, XIV. 425—beauty of, IV. 544.

# CHI-CHI

Children, less able to want food than adults, III. 180-exposing of, IX. 457causes of mortality among, XIX. 607—importance of warm clothing to, 611 enactments regulating their labour in factories, XXI 790

- (Mr), his galvanic battery, XXI. 611; and its results, 626 Childrenite, mineral, XV. 94.

Childs (Col.), his survey of the proposed ship-canal through Nicaragua, AVL 245, 246

CHILE, VI 541, II. 689, 704-climate, 673 -ancient civilization of, 690-native tribes of, 691; their probable descent 695—revolution in, 701—consuls and vice-consuls in, VII 337—mines of, XV. 235-plants, XVII. 629-Chilian Andes, 592-height of mountains in, 644, 645—production of the precious metals in, XVIII. 461, 462, XV 246 serpents, XIX. 54-weights and measures of, XXI. 810—volcanoes, 603—map of, VI. Plate Chileno-Patagonians, IX 348.

Chili pine See Araucaria.

nettle order of plants, V. 192. CHILIAD, VI. 554

CHILIAGON, in geometry, VI. 554. CHILKA, lake in Hindustan, VI 554 Chilkeah, XIII 59

Chill, theumatic affection in animals, XXI 557.

CHILLAMBARAM PAGODA, VI 554. CHILLIANWALLA, in Hindustan, VI 554-battle of, XVIII 693

CHILLICOTHE, town in Ohio, VI. 554, XVI. 490.

Chillies, V 201. Chillingham Castle, wild cattle at, XVI. 300.

CHILLINGWORTH (William), VI. 554. Chilmark limestone, as a building stone, XX. 712

CHILO, one of the seven sages of Greece. VI. 555

CHILDE, Island, VI 555, 544, 546, 547; XVII 884 Chilognatha, order of myrapods, XV.

747 Chilomycterus, genus of fishes, XII 314.

Chilonycteris, teeth of, XVI 452 Chilopoda, older of myriapods, XV. 748. Chiloscyllium, genus of fishes, XII 323. Chilperic, X 4

CHILTERN HUNDREDS, VI 555; V. 722.

Hills, V 721, XVII. 36.
CHILLERA, VI. 555—genus of fishes, XII. 319—fossil, 342

Chimeride, family of fishes, XII. 318 Chimerode, VI 555; II 669; XXI. 603 —Humboldt's barometrical measurement of, IV. 467-height of, VIII. 386; XVII 644

CHIME, VI. 555—chimes of clocks, VII 22 Chimeriti (Jacopo), his binocular pictures, XX. 684

Chimera, genus of fossil fishes, XII 340. Chimerical figures, in heraldry, XI 334. Chimilpopoca, Mexican king, XIV. 700. CHIMNEY, VI. 555; III 488--unknown to

the Romans, 473; VI. 555-invention of, 457—of furnaces, X. 354, 355—draught in, 353, 354—glass chimneys for gas-burners, 426—nature of the draught in, XVIII 77-tall chimneys for abating the smoke nuisance, AX 359 -cure of smoke in, 352. See Furnace, Smoke, Stoves, &c.
—— sweepers, law of apprenticeship

to, XIV. 349—discases of, 443. Chimney-pieces, building of, V. 740. Chimpanzee, XIV 137; XVII. 631—dentition of, XVI. 456, 457.

CHINA, VI. 557; III. 736; XVII. 610breed of swine, II. 355—Peruvian civilization probably derived from, 687. 688-government, ib.-agriculture, 1b. mode of disposing of their dead, ib human sacrifices, ib.—architecture, ib.; III. 401, 438—rafts, II. 688—early his-tory of, III. 742; VII. 717—conquered by Zinghis Khan, III. 745—visits of

# CHI—CHI

missionaries to, 753-trade and manufactures, 756, 757-large bells in, IV. 629—trade in bird's nests, 727—trade at Canton, VI. 199-trade with Cochin China, VII 48—cotton manufacture, 439—silk, VIII 276, IX. 213—silkworm, 1b - trade with India, XI 459, XVIII. 472; Japan, XII 695, 696, Java, 706, IV 497, Russia, XIX 551; Siam, XX. 234; Singapore, 307—war with Britain in 1840, V. 668, VI 596—missions established in, XV. 271 monarchy of, 412-river system of, XVII. 607--emigration from, VIII. 651 -coms of, XVI 391-imports of the precious metals into, XVIII. 467, 468— trade of the United Kingdom causes an unusual increase of exports of the precious metals to, 471-trade of the United States with, ib -opium trade, 472-cultivation of rice, XIX 156-use of silk in, XX. 277, quantity exported, ib; manufacture of, 287-analysis of the soil of the tea-lands, XXL 84-account of the cultivation and manufacture of tea in, ib. et seq -tea-plant indigenous to, 88-effect of the lecent disturbed relations with, on the tea market, 91—weights and measures, 810. See Chinese.

China blue, VIII 319 - grass, manufactures in, XIII 495fibre of, XXI. 782-tree producing, V 206

INK. VI 599. - ROOT, VI 599.

stone, VII. 408.

WARE, VI. 599; XVIII 431, 434, 435—crackle china, 435, honeycomb,

Chincha islands, II 299-their guano, ib , XVII. 469, 473

CHINCHILLA, city of Spain, VI. 599

rodent quadruped, VI. 599, IV 824, XIV. 183, 189—its fur, X. 349. Chin-cough See Hooping-cough.

Chine-felon, disease in animals, XXI 557. Chinese, VI. 557-their method of calculation, II. 8, 9-accents, 76-alphabet, 609 -manner of writing, 611-compared with the Peruvians, 687—the uniformity and unchangeableness of their customs much exaggerated, 688, n. 8—their numerals and numerical fancies, III. 573, 576 - alleged antiquity of their annals, 215; and nation, XI. 541-their architecture, III. 401; its uniformity of style, II. 688-origin, III 747-character, 749—commerce, 756, 757—astronomy, 783—residents in Batavia, IV. 497—in Java, XII 709—in Borneo, V.
48—language, VI 571; XIII 198, 199,
205—bamboo floats used by, 440—locks,
533—make no use of milk, VI 201 chronology, 675—consuls and vice-consuls in, VII 337—mathematical know-ledge, X. 503—their filigree work, IX. 579—fuel-balls, X. 318—their mode of japanning, XII. 699—early knowledge of gunpowder, XL 150, and of the compass, XIV 1-their sculpture, XIX. 848-pretended ancient knowledge of logarithms, XIII. 555-mythology, XV. 760-use of opium by, XVI 518-paper, XVII. 249—their supposed resemblance to the Egyptians, 354—printing, XVIII. 522, n. 1—their skill in pyrotechny, 706 -their adulterations of tea, XXI. 87mode of colouring teas, ib -their imitations of English precedents in regard to the tea-trade, 89—fondness for the Trepang, 985. See China.

balance, V. 385. fire, in pyrotechny, XVIII. 707. pavilion, musical instrument, XV. 713.

Turkestan, XXI 367, 28.
CHINGLEPUT, in Hundustan, VI. 599.
Chingopamari, mountain, XVII 598. See Deodunga.

CHIN-HAE, in China, VI. 599. CHIN-KIANG-FU, VI 600. CHINON, in France, VI. 600.

CHI-CHL CHINSURA, in Bengal, VI. 600 CHIO, or Chios, VI 600 See Scio. CHIOGGIA, Italian town, VI 600. Chichite, mineral, XV. 93. CHIONE, VL 600 Chionis, genus of birds, XVI. 808. CHIPPENHAM, in Wiltshire, VI 600; XXI. 879—cloth manufacture of, 918. Chippewa, river, XXI. 893 CHIPPEWAY INDIANS, VI. 600; II 680. Chippewayan Mountains, XXI, 420 See Rocky Mountains. Chippewyan (Fort), climate of, II 674. CHIPPING, CHIP, CHEAP, names of places signifying a market, VI. 600. Chipping-Barnet, IV 447. CHIPPING-NORTON, VI 600. CHIPPING-SODBURY, VI. 600. CHIQUITOS, in Bolivia, VI. 600, IX. 349mountains, IIL 129 Chirk aqueduct, III. 338-Chirk castle, VII. 736.

VII. 736.
Chirocentrus, genus of fishes, XII. 250.
CHIROGRAPH, VI. 600
CHIROMANOY, VI. 600; VIII. 54
CHIRON, VI. 600, XIV. 451—the presumed father of surgery, XX, 809.
genus of insects, IX. 120.

Chironectes, genus of mammalia, XVI.

Chironemus, genus of fishes, XII. 277. Chironomus, genus of insects, IX. 225. CHIRONOMY, VI 601 Chiropodists, XIV. 465. Chiroptera, bones of, III. 77 et seg .-

muscles, 91-intestines, 110 Chiroscelis, genus of insects, IX. 130. Chirotes, genus of reptiles, XIX. 39. Chiru, in zoology, XIV. 210. Chirurgery, or surgery See Surgery. Chirurgical academies, II 62

Chirus, genus of fishes, XII 283 Chisel, VI. 601—chisels for turning, XXI. 391.

Chisholm (Major), III 726 CHISLEY, Jewish month, VI 601. CHISWICK, in Middlesex, VI 601. Chitine, VIL 537, IX. 29 Chiton, genus of mollusks, XV 379. Chitonidæ, family of mollusks, XV. 379 CHITORE, in Hindustan, VI. 601. CHITTAGONG, VI. 601, IV. 651 Chittah, or hunting tiger, XIV. 169

CHITTLEDROOG, town and fortress in Hindustan, VI 601. CHITTOR, VI 602.

CHIUSA, in Italy, VL 602.

CHIVALEY, VI. 602—court of, 627—period of, III. 636—origin of, VIII. 230, XIII. 108—influence of the crusades on, VII 532—Persia the birthplace of, XV. 763 -its influence on poetry, XVIII. 107—serio-comic romance of, 110—orders of, in Brazil, V. 295-romances of, XIX.

CHIVASSO, city of Piedmont, VI. 627.

Chive, plant, XI. 741. Chladm (Ernest), I. 891—on the velocity of sound in different media, ib—on the vibration of plates, 1b-on meteoric bodies, 892; XIV. 635—on musical sounds, II. 112—on harmony, XV. 702 Chlænaceæ, nat. order of plants, V. 185 Chlænius, genus of insects, IX 94.

Chlamyphorus, genus of mammalia, XIV. 191; XVII 681. CHLAMYS, VI 627.

- genus of insects, IX. 149. Chloanthite, mineral, XV. 116. Chloe, VI. 627. Chlora, genus of annelides, XI 297.

Chlophora, genus of insects, IX 216. Chloranthaceæ, nat. order of plants, V 207 Chlorate of potash, powder from, XL 158 —its use in making matches, XIV. 351, 352.

Chloric acid, VI 468. Chloride of lime, employed in bleaching, IV. 760, 761—tests for, 763—chloroform prepared from, VL 628—as a deodorizer. XTX. 621.

of zinc, VI. 491—as a preservative of tamber, XX. 167.

## CHL-CHO

Chlorides of metals, VI. 483-aluminum, 488—antimony, 494—chromium, 493—arsenic, 495—barium, 486—calcium, 487—magnesium, ib —iron, 490—bismuth, 496-potassium, 485-manganese, 491—copper, 497—sodum, 485—stron-tum, 487—uranium, 496—lead, 497— mercury, 498—silver, ib.—gold, 499 titanium, ib -tin, 493-vanadium, 494

—platinum, 499 See Chemistry
CHLORINE, VI. 627, 466; XV. 64—in
plants, II. 388—its compounds with carbon, &c. (see Chlorides)-discovery of, IV 758—used in bleaching, 758, 760; I 589; XXI. 776—its power of destroying noxious states of the atmosphere, IV 184-its use in determining the quahties of gas, X 429—Sir H. Davy on, I 969, VII. 670—its specific gravity, XII. 89-its poisonous properties, XIV 435 as an element in the crust of the globe, XVII, 619.

- protoxide and peroxide of, VIL 670

Chlorion, genus of insects, IX. 195 CHLORIS, VI 627. Chlorite mineral, XV, 78. - schist, XV 154

XVII. 703.

Chloritoid, mineral, XV. 78. CHLOROFORM, VI. 627, 511-employed in the management of bees, IV. 588manner in which it may cause death.

Chloromelan, mineral, XV. 79. Chloropal, mineral, XV. 90 Chlorophæite, mineral, XV. 90. Chlorophane, XV 93—phosphorescent pro-

perties of, VIII. 598. Chlorophyll, colouring matter of plants, V. 73

Chlorophyllite, mineral, XV 88. Chlorops, genus of insects, IX. 257. CHLOROSIS, VI. 633.

Chlorospermeæ, nat order of plants, V.

Chlorospinel, XV 87. Chlorous acid, VI 468 Chloruret of azote, I 952. Chnodomarus, VII 306 Choanites, fossil sponges, XVII 93. Chocks, in ship-building, XVI 98 Choco, platina mines of, XV 236

CHOCOLATE, VI 633, 49; IX 761; VII. 52-electricity of melted, VIII. 565adulterations of, IX. 769

order of plants, V. 184 colour, dyeing of, VIII. 319. CHOCTAW INDIANS, VI. 633, II 680. Choczim, Russian town, VI. 634-siege of, XXI 371

CHODOWIECKI (Daniel), VI. 633 CHOENIX, Greek measure of capacity, VI. 633.

CHOERINA, VL 633.

Chöeroichthys, genus of fishes, XII 315. Choeropotamus, fossil genus of quad-rupeds, VI 633.

Choeropus, genus of mammalia, teeth of, XVI 448 CROIR, VI 633. Choiseul (Duke de), IV 479, X 37.

- d'Aillecourt, on the crusades, VII. 527-28.

CHOISY-SUR-SEINE, town of France, VI 633.

Choke-damp, VII. 643. See Carbonic acid gas.

Chokier (Surlet de), baron, regent of Belgium, IV. 608.

Choking, among cattle, XXI. 564, 571. Cholalic acid, VI. 520.

Cholæpus, genus of sloths, dentition of, XVI. 441.

CHOLERA, VI. 633—in Paris in 1832, X. 206—in Egypt, VIII. 423—operatives in Manchester factories comparatively exempt from, XIV 253, n.—may possibly be caused by animalcules, XXI.

CHOLET, French town, VI 634. Choleva, genus of insects, IX. 114.

# CHO-CHR

Chologaster, genus of fishes, XII. 236. Cholula, pyramid of, XIV, 719, 720. Chomatodus, genus of fossil fishes, XII. 241

Chondrocanthus, genus of entozoa, XXI.

Chondrodite, mineral, XV 89. Chondropterygians, fishes, XII. 205, 319 Chondrosteus, genus of fossil fishes, XII 338; XVIL 125.

Chondrostoma, genus of fishes, XII. 257. Chonetes, fossil mollusks, XVII. 105. Chonikrite, mineral, XV 80.

CHOPIN, Scotch liquid measure, VI. 634. Chops of the mouth, III. 48

CHORAGIC, VI 634—monument of Lysi-crates, III 442, 462, 468, 715; IV. 164—of Thrasyllus, III. 462—of Stewart, on the Calton Hill, Edinburgh, VIII. 406

CHORAGUS, VI 634 CHORAGUS, VI 654. See Khorassan. CHORASSAN, VI. 634. See Khorassan. CHORD, OF COTC, VI. 634—in music, ib; I. 728, XV. 720-in geometry, VI. 634, X. 513.

CHOREA, VI. 634; XVII. 700. CHOREGRAPHY, VI. 634 Chorentes, devotees, XV. 407. CHORIAMBUS, a foot, in ancient poetry,

VI. 634, IX. 770. Choridactylus, genus of fishes, XIL 283. Chorinemus, genus of fishes, XII. 297.

Chorion, in animal physiology, XVII. Chorisis, in botany, V. 121. CHORLEY, town in Lancashire, VI 634.

Chorlton-upon-Medlock, XIV. 256. Choroid coat of the eye, III. 43-in various animals, 96-whether the seat of vision, XVI 693.

-gland of fishes, III. 96. Choromo, silver mines of, IV. 825. Choron on theories of harmony, XV. 702 -on musical invention, 738

CHORUS, in ancient drama, VI. 634; VIII 134\*—prohibited, 140 - in music, VI. 634.

Chosroes, king of Persia, XVII. 435 -Antioch destroyed by, III 274-his invasion of the Roman empire, VII. 312, XVII. 195-subjugation of Egypt, VIII.

Parthian king, XVII. 312. CHOTYN, or Choczim, Russian town, VI. 634.

CHOUGH, a species of corvus, VI. 634, XVI 771.

Choumara on fortification, IX. 884 Chous, Greek liquid measure, VI. 634. Chowbent, in Lancashire, IV. 174.

CHRISM, VI. 634—pence, ib. CHRIST, VI. 634—meaning of the name, I 480, n. 1-establishment of his kingdom, 480-date of his birth, XIL 757, and death, 760-doctrine concerning the XXI 207-his twofold estate 211 -his offices, 212-proofs of his divinity, 209. See Jesus, Messiah.

ORDER OF, VI. 684 Christ's Hospital, London, XIII 667. - College, Cambridge, XXI. 466.

thorn, XVII. 762. CHRISTCHURCH, town in Hampshire, VI. 634.

Cathedral, Dublin, VIII. 221. College, Oxford, XVII 35; XXL 459—founded by Wolsey, 901. Christian cra, VI. 667—Christian art, early, XIX. 859.

VII. of Denmark, VII. 742. CHRI TIANIA, capital of Norway, VI. 635

-libraries at. XIII. 427. Christianite, mineral, XV. 71.

CHRISTIANITY, VI. 635- dissertation on the rise, progress, and corruptions of, I. 447—in Abyssinia, II. 56—capacity of the American tribes for, 692—Lord Hailes' inquiry into the secondary causes assigned by Gibbon for its rapid progress, VII. 635, 636—inimical to theatres, VIII. 142—renunciation of, in France, X. 84-re-established by Bonaparte, 125, and n-relation of Moham-medanism to, XV. 307—Gibbon's at-

#### CHR—CHR

tacks on, X. 615—Kant on, XIII. 51—Paley's Evidences of, XVII 200, 202 approximation of some of Plato's doctrines to, 793-its influence on the arts, 59; and on poetry, XVIII. 106—Voltaire's disbelief of, XXI, 667—its introduction into Britain, V. 380; England, VIII. 656; Poland, XVIII 137, Sweden, XX, 845; Spain, 459; Russia XIX, 470: Scotland, 744, 749-estab lishment of, by Constantine, 353-effects of this on Rome, 364 See Christians, Jesus, Religion, Theology, Reformation.

CERISTIANS, VI. 640-a name first given at Antioch, I 485, n 1—never applied by the Apostles to the members of any Church, 485; nor by Christians themselves to one another, ib., n 1, 491, n. - demonology of the early Christians, III 311—persecuted in Egypt, VIII. 472, 473, 479, 485—Beybar's proceedings against, 484-funeral rites, X. 844—Pliny's letter respecting the early, XVIII. 13—persecuted by Nero, XIX. 338; Trajan, 342; Hadman, 343; Aurelius, 344; Trajanus Decius, 348, Dioclesian, 350 — favoured by Constantine, 351—discountenanced by Julian, VII. 307, 308. See Christianity

Christie (Mr), on magnetism, XIV. 10, 11, 12, 33, 35, 39, 55, 56, 57 et seq

Christiern, king of Denmark, his invasion of Sweden, XX 846—chosen king of that country, ib.—his tyrannical reign, 1b.—his attempts to recover the kingdom, 847.

CHRISTINA, queen of Sweden, VI 641-reign of, XX 851-her correspondence with Bayle, IV. 523—her invitation to Descartes, VI. 280. Christmos, XX. 478 et seq.

Christison (Dr), on gas-burners, X. 425, 426 -on the deleterious influence of the atmosphere of towns on plants, V. 106, 107—on the alcohol in porter, 332; in wines, XXL 890-his work on poisons, XIV. 424

CHRISTMAS-DAY, VI. 642, 667; XII, 757; T. 502.

Christology, XXI. 184, 207. See Christ, Christophe, king of Hayti, XL 257 Christopher North. See Prof. Wilson. CHRISTOPHERS (St), or St Kitts, island, VI.

Chromate of lead, a dyestuff, VIII. 297. CHROMATIC, VI. 643

Chromatics, VI. 643; XVI. 578. See Optics, Polarization of Light. Chromatype, XVII. 550. Chrome, XVII. 623.

Chrome-garnet, XV. 85. Chrome-ochre, XV. 112.

Chromic acid, VI. 498-salts of, ib. Chromididæ, family of fishes, XII. 265. Chromis, genus of tishes, XII, 265. Chromite, mineral, XV. 108.

CHROMIUM, VI. 662, 493; XV. 66.

Chromo-carbon process, employed on the maps of the trigonometrical survey, XXL 337.

Chromo-lithography, XIII. 513. Chromule, V 73. Chronic, VI. 662—infiammation of the

liver among cattle, XXI. 569; cough in, 573.

CHRONICLE, VI. 662-of Winton, XXI. 892. CHRONICLES, two books of the Old Tes-tament, VI. 662.

- of the middle ages, VII. 535. CHRONOLOGY, VI. 664; XI. 541—ante-diluvian, III. 267; XI. 540—ancient Egyptian, VIII. 449—the Parian chronicle, III, 720-Sir I. Newton's work on, XVI. 208—its relations to philology, XVII. 526, 527. See Calendar, Era.

Chronological schemes, number of, XI. 540. Table of political events, and of inventions and discoveries, from the creation to the year 1854, VI. 677.

# CHR-CHU

Chronological Table of foreign authors and their works, VL 698

- Table of British authors and their works, from the sixteenth century, VI.

CHRONOMETER, VI. 710; VII 27-chronometer escapement, 33, 34—French, IV. 678—Earnshaw's, VII 34—Harrison's, XIII 686—to find the longitude by, 687; XVI. 46-improvements on, 109-importance of, in seamanship, XX.

Chronometrical thermometer, VII. 30. Chronoscopes, I 987 - electro-magnetic, XXI. 644.

CHRUDIM, town in Bohemia. VI 710. CHRYSALIS, VI. 710; IX 53 et seq, 203 et seg -of the silk-moth, XX. 290 Chrysammate of potash and magnesia,

optical properties of, XVI. 669 CHRYSES, priest of Apollo, VI 710 Chrysides, tribe of insects, IX 193 CHRYSIPPUS, Stoic philosopher, VI. 710, T 319.

Chrysis, genus of insects, IX 193, Chrysobalaneæ, sub-order of plants, V

CHRYSOBERYL, a siliceous gem, VI 710, XV 87

Chrysochloris, genus of mammalia, XIV. 151-dentition of, XVI. 450. Chrysocolla, mineral, XV. 102. Chrysocoma, genus of birds, XVI. 811 Chrysogaster, genus of insects, IX. 240

CHRYSOLITE, gem, VL 710; XV. 89 CHRYSOLORAS (Manuel), VI 710 Chrysomela, genus of insects, IX. 150. Chrysomelinæ, tribe of insects, IX. 148. Chrysophane, mineral, XV. 79.

Chrysophola, genus of insects, IX. 123. Chrysophrys, genus of fishes, XII. 286.

CHRYSOPRASE, VI. 711, 67; II. 232, XV.

Chrysops, genus of insects, IX 231 Chrysostom (St John), VI. 711—Mont-faucon's edition of his works, XV. 516 Chrysotile, mineral, XV. 80.

Chrysotoxum, genus of insects, IX. 238. Chrysotus, genus of insects, IX. 243 CHUB, fish, VI. 712; XII. 256—angling for, III. 161.

CHUBB (Thomas), VI. 712.

(M1), his locks, XIII 536—his latch-lock, 541—his detector, 536—on locks, 535 et seq.

Chudleigh, town in Devonshire, VI 712 Chumbal, mountain, VIII. 386. Chumbul, river in Hindustan, VI. 712 CHUMPANEER, in Hindustan, VI. 712.

CHUNAM, VI 712. CHUNAR, or Chunargher, in Hindustan, VL 712; XVII 21

Chuni. See Hunni. CHUPMESSAHITES, VI. 712.

CHUPRAH, town in Hindustan, VI 712. CHUQUISACA, capital of Bolivia, VI. 712 climate of, IV. 826-population of, 827, 828—university of, 830

- department of, IV. 821. Chuquito, or Titicaca, lake, IV. 822. See Titicaca.

Chur, Swiss town, VI. 713 Church, VI. 713; XII. 370—churches founded by the apostles, I. 490, few particulars given of them, 1b -spires, III. 449 — bells, IV. 628 — burying in churches, VI. 22—consecration of, VII. 298-painted glass in the windows of, X. 669-in Chile, VI. 546-Greek, XI. 33—in Holland, 588—heating of, by stoves, XX. 742, 743—no established church in the United States, XXI. 422 churches in London, XIII. 666, 671, 672; Dublin, VIII. 222; Rome, XIX,

368. of England, VIII. 744. 792—in Ireland, XII. 531—proposed union with the Greek Church, XI. 35. See Epis-

- Scotch Established, XVIII. 492its extent, 493-constitution, ib .- standards, ib -endowments, 494 - theolo-

# CHU-CIC

gical education, 1b -schools, 1b -missions, ib.—its relaxation in doctrine and discipline, 499 - early history of the Church in Scotland, XIX, 749, 751, 753 -proportion of adherents to, 801.

Church, Free. See Free Church. - (General), XL 29 Church-rates, VIII. 744 CHURCH-WARDENS, VI. 718.

CHURCHILL (Charles), satirist, VI. 715; XVIII. 124-his attack on Dr Johnson. XIL 799

- (John), duke of Marlborough, VI. 713; III 217-appointed general of the British forces in the war with France, 1772. V. 447 - his continental campaigns, ib, 448 et seq, X. 34—disgraced, V 451—his death, 464—his co-operation with Prince Eugene, IX 368-69palace voted to, by parliament, XXI. 518—his wealth and avarice, 519, n 1. (Sarah), duchess of Mailbolough,

III. 216 Churchman (Mr), on the variation of the needle, XIV. 49

CHURCHYARD, VI 715. (THOMAS), poet, VI 715. CHURN, VI. 715; VII 623. Churning, process of, VII. 623. Churoo, IV. 691.

Churum, Turkish town, XXI. 80. Chusan, island, VI 715, 596, 597. Chusite, mineral, XV. 89

CHUTTERPOOR, city of Hindustan, VI 716. CHYLE, VI. 716; II. 782, XVII. 660cells, 650-vessels conveying the, II 761; III. 62 See Lacteals Chylific ventricle, in insects, IX. 51. Chylification, XVII. 660.

Chyliza, genus of insects, IX 252. Chyme, XVII. 659, 660. CHYTLA, VI 716

Ciampi (Antonio), VIII 571. CIBBER (Colley), VI. 716—on on stage-declamation, VIII 164; XXI 172—his plays, VIII 165, sums paid for, XXI 172, 178—new dramatic characters created by, 174.

- (C. Gabriel), sculptor, XIX. 867; VI 716

- (Mrs), actress, XXI 175 (Theophilus), actor, XXI. 175share in the authorship of Lives of the Poets, 516 and n. 1 CIBORIUM, VI. 716

Cibotion, genus of fishes, XII. 313. CICACOLE, town in Hindustan, VI. 716 Cicada, genus of insects, IX. 167. Cicadariæ, family of insects, IX. 166.

CICATRIX, VI 716

CICERO (Marcus Tullius), VI 716-on the law of right reason, I 86—on Cato's stoicism, 433—his anatomical know-ledge, II. 751—on beauty, IV. 587—on the influence of the Athenian upon the Roman laws, VI. 789—his disbelief in a future state, I 462, 463—his visit to the tomb of Archimedes, III 430--on the pleasures of husbandry, II. 250-some of his works recovered by Petiarca, XVII. 499 - digest of his works by Bellenden, IV 637-Middleton's alleged plagiarism in his Life of, ib; XIV. 810—discovery of his treatise De Republica, IV. 706; XIV. 96, XVII. 212—his Dialogues, VII. 799, 800—on the Roman constitution, VIII. 760—his oration for Milo, XV. 18-on mnemonics, 285-on the uniformity of moral judgments, 542 -on morals, 554, 556-on virtue, 558, -on the universality of moral law, 569—Cathline's conspiracy suppressed by, XIX. 323, VI. 337—recent disco-very of works of, XVII. 211—banish-ment of, XIX. 324—recall, 325—death, 328-on ancient sculpture, 854-his high estimate of physicians, XX. 812his friendship for Varro, XXI. 528-on the existence of God, 181.

- (Quintus), IX. 577. Cichlops, genus of fishes, XII. 288. Cichoraceæ, plants, V. 197. Cicindela, genus of insects, IX. 78.

#### CIC—CIN

Cicandeletæ, tribe of insects, IX. 78synoptical table of, 80 synoptical table of, 80 Chemiurus, genus of birds, XVI. 768. Cicisbeo, VI 721; XII. 662 Ciciur, or Ciclich, VI. 721. Croosxara (Leopold), count, VI. 721—on Etruscan art, XIX. 850, n. Ciconia, genus of birds, XVI. 799. Cicuta, water-hemlock, VI 721 Cro, the, VI. 721; II. 619—Chronicle of, XVIII. 112; XX 468 Cidaridæ, family of echinoderms, XXL

991. CIDARIS, mitre of the Jewish high-priest, VI 721.

genus of echinoderms, XXI. 989, 991—fossil, XVII. 99, 100.

991—10881, AVII. 99, 100.
Cidarites, echinoderms, XXI. 989.
Cider, or Cyder, VI. 721; IX. 759—tax
upon, in 1763, V. 467—mulberry-eder,
XI 717—Devonshire, VII 764—Herefordshire, XI. 349—France, X 256 CIEZA, or Zieza, Spanish town, VI 722 CIGAR, VI. 722; XXI. 294, 295—manu-facture of, at Seville, XX. 66, 490. Cigna on electricity, VIII 529. Cignani (Carlo), Italian painter, VI 722. Cignolis' catalogue of stars, IV. 80.

CIGOLI (Lodovico Cardi da), VI. 722 CILIA, VI. 722—in the infusoria, III. 207 -in zoophytes, XXI 973 et seg.

Chary circle and processes of the eye. III 43, 96, XIII 461. CILICIA, VI. 722-coins of, XVI. 377. CILICIUM, VI 723

Ciliogrades and ciliograda, zoophytes, XXI 1000, 1001.

CIMABUE (Giovanni), VI. 723; XVII. 61 CIMAROSA (Domenico), VI 723 Cimbex, genus of insects, IX 183

CDIBRI, ancient Celtic nation, VI. 723; V. 374; X. 574; XX 883—their war with the Romans, XIX. 319—Cimbric

language, XIII 212. Cimento, Accademia del, II 63 CIMMERII, VI. 724

Cimex, genus of insects, IX 163. CIMOLIA TERRA (Cimolite), VL 724 Cimolite, XV 84, VI 724.

Cmon of Cleonæ, painter, VI. 724; XVII. 53—catagrapha said to have been invented by, VI 330, XVII 53, n. 2
——son of Miltades, VI 724—Athens
improved by, IV. 160—his exploits, ba-

nishment, and death, 201, 202. CINALOA, in Mexico, VI 724. See Sinaloa. CINCHONA, or Peruvian bank, VI. 724; IV. 444; V. 196; VII 230—region of the cinchonas, V 228; XVII 629.

Cinchonacem, nat. order of plants, V. 195. Cinchonine, VL 518.

CINCINNATI, in Ohio, VI 725, XVI. 490—climate, XXI. 421—mean temperature, VI. 773. CINCINNATUS (Lucius Quintius), VI. 726;

XIX. 300. Cinclus, genus of birds, XVI. 753.

Cinders, use of, in mortar, XX. 714. CINEAS, a Thessalian, VI. 726. Cinematics, branch of geometry, XIV.

CINERITIOUS, VI. 726. See Brain Cingalese, or Singhalese, VI. 391-language, XIII 207. Cinna, XIX. 321.

CINNABAR, mineral, VI. 726, 498; VIII. 388; XV. 122, 237-fibrous and hepatic. 122.

CINNAMON, VI 726; IV. 445, V. 204— imports of, VIII. 784—oil of, XVI 496 culture of, in Ceylon, VI. 394, 400; Cochin-China, VII. 48

Cinnamon-colour, dyeing of, VIII. 313. Cinnamon-stone, XV 85; XVII. 623. Cinnyris, genus of birds, XVI. 769

Cinquecento, Italian works published during the period so named, XIL 660. - style of architecture, III. 450. n. l. 453 et seq.; XXI. 495. Cinquefoil, in architecture, III. 508.

CINQUE PORTS, VI. 727; XVL 89-arms of, XI 323.

Cintio, his romances, XIX. 284.

#### CIN-CIS

CINTRA, town in Portugal, VI. 727-Convention of, V 604, XVIII 387, XXL

Cinulia, fossil mollusks, XVII 109, 111. CINYRA, VI. 728.

CIOTAT (La), French town, VI. 728 CIPHER, or Cypher, VI. 728; III. 582. CIPOLIN, or Cipollino, an Italian marble,

VI 728, XV 92, 147. CIPPUS, VI. 728

CIPRIANI (Giovanni Battista), VI 728. Circatus, genus of birds, XVI 743. CIRCARS (Northern), in Hindustan, VI.

CIRCASSIA, VI 730—inhabitants of, 342, 731; IX. 346—contests with Russia, XIX. 498.

CIRCE, VI. 731.

genus of mollusks, XV 350. Circeidæ, zoophytes, XXI. 1000 CIRCEII, town of Latium, VI 731 Circelliones See Circumcelliones. CIRCENSIAN GAMES, VI 731, 733. CIRCLE, VI 732; X. 513, 544, 552—at-

tempts to ascertain the ratio of the diameter to the circumference, L 699its incommensurability first demonstrated by Lambert, 700-problems respecting, X. 527-quadrature of, 530; XX. - of curvature, in conic sections, VII. 285—mensuration of, XIV 509—perspective of, XVII 447—Mural, IV. 153—repeating, Borda's improvement 153—repeating, Borda's improvement of the, V 37—of perpetual apparition,

and of perpetual occultation, VI 732 CIRCLES, of the sphere—of altitude—diur-nal—horary—of latitude—of longitude -polar--Druidical--of the empire, VI

CIRCUIT, VI. 732-inconveniences of circuit-courts, VIII 786

CIRCULAR, VI 782-instruments - numbers — sailing, 1b.—saws, XIX. 677—arches, XX. 728.

Circulation of the blood, see Blood - of the sap in plants, V. 110; Coulomb on, VII 464

Circulating trade-museums, XXI. 324. CIRCUM, VI. 732

CIRCUMCELLIONES, VI 732.

CIRCUMCISION, VI. 732—practised in Arabia, III 354—by the ancient Egyptians, VIII. 440—by the Kafirs, XIII. 36.

Circumduction, action of the muscles, III.

CIRCUMFERENCE, VI. 733; X. 513. CIRCUMFERENTOR, VI. 733. CIRCUMFLEX, VI. 733. CIRCUMGYRATION, VI. 733 CIRCUMLOCUTION, VI 733. CIRCUMPOLAR STARS, VI. 733, CIRCUMPOTATIO, VI. 733 CIRCUMSCRIBED, VI. 733 CIRCUMVALLATION, VI. 733.

Crrcus, VI. 733—Maximus, ib.—games of the, VI. 731, 734; X. 399. genus of birds, XVL 744.

CIRENCESTER, VI 734; X 682; XXI 879

—Royal Agricultulal College near, X. 680; IL 366.

Cirillo (Dr Domenico), on the Sicilian papyrus, XVII. 246.

Circhatulus, genus of annelides, XI 299. Cirrhibarbus, genus of fishes, XII. 309. Cirrhigrada, echinoderms, XXI. 984 Cirrhilabrus, genus of fishes, XII 267.

Cirrhinus, genus of fishes, XII. 257. Cirrhi-spinigrada, echinoderms, XXI. 984. Cirrhites, genus of fishes, XII. 277. CIRRIPEDES, VI. 734-fossil, XVII 100,

101—their near approach to the crustacea, VII 548—their classification, XV. 319.

Cirrus, cloud, XIV. 656-cirro-cumulus, -cirro-stratus, ib

fossil mollusks, XVII 111.
CIRTA, city of Numidia, VI. 734; XVI.

Cis, genus of insects, IX. 142. CISALPINE, VI. 734-republic formed, XIL 658.

CISNEROS (Francisco Ximenes de), VI. 784. See Ximenes.

# CIS-CLA

CISPADANA GALLIA, VI 734 CISSAMPELOS PAREIRA, a plant used in medicine, VI 735.

Cissoid of Diocles, X. 544. Cistaceæ, nat. order of plants, V. 183. Cistela, genus of insects, IX. 132. Cistelides, tribe of insects, IX. 132.

CISTERCIANS, VI 785 CISTERN, VI. 735—barometer, IV. 453—blow-up cisterns, XX. 794. Cistus-rape order of plants, V. 209

CITADEL, VI. 735

CITADINESCA, a kind of Florentine mar-ble, VI 735. CITHERON, mountain in Bœotia, VI. 735. CITHARA, VI. 735 See Lyre.

Citharinus, genus of fishes, XII 246 CITIZEN, VI. 735—of Rome, XIX. 306, 321—Italians admitted to the rights of Roman citizens, 320, and all subjects of the empire, XX. 458-citizenship in

the United States, XXI. 430.
Chric acid, VI 515, XIII 331—used for discharging colours, VIII 316—scurvy cured by, XVI. 106

Citron, V. 186; XI. 729; XII. 445 Cirrus, genus of plants, VI. 735; V. 185,

CITTA DI CASTELLO, town of the Papal States, VI 735.

- VECCHIA, in Malta, VL 736; XIV.

CITTERN, VI 736 CITY, VI 736—influence of cities on civi-lisation, XIII 255

CIUDAD RODRIGO, VI 737-taken by the French, V. 608—stormed by the British in 1812, 611; XXI. 824.

REAL, in Spain, VI 787
REAL, in Mexico, VI 787.
CIUDADELA, in Minorca, VI 787.

CIVET, VI 737, XIV 166 CIVIC CROWN, VI. 737 CIVIDADE, in Italy, VI. 737—battle of,

CIVIL, VI 737.

engineers, institution of, III 506 academical rank of, at Durham, XXI.

engineering, I 801—its relation to physics, 865

- LAW, VI. 787; XIII. 255-study of it accelerated human improvement at the revival of letters, I 14-venerated by Leibnitz, &c., 92—ought to be the groundwork of speculations on jurisprudence, 93—Cujas on, VII 572— study of, at Bologna, XXI 449; Oxford, 452.

- LIST, VI 748; VIII 751; XVIL -sum fixed for the civil list of the Sovereign, XI. 773—of the United States, XXI. 428. - STATE, VI 748.

war, in Rome, XIX. 321-in Switzerland, XX 886.

TEAR, VI 748, 76
CIVILIAN, VI. 748—college of civilians,
VII 113.

Civilisation, its existence a proof of superhuman instruction, I. 452-low capacity of the aboriginal Americans for, IL 692 or and aboriginal Americans 107, 11. 692
—American, 683; IX. 348—flourishes most in temperate legions, II 683—what it consists of, XL 545—its connection with Christianisation, XV. 274—its progress in Europe, IX. 395—true basis of modern, XIV. 459-linguistic records of, XVII. 537—ancient mysteries supposed to commemorate the origin of, XV. 754

-its effect on poetry, XVIII. 96. CIVITA CASTELLANA, VI. 748. DI PENNE, town of Naples, VI 748.

VECCHIA, in Italy, VI. 748; XVII. 240, 243,

240, 243. CYPAX, IN France, VI. 748 CLACKMANNAN, VI. 748—trigonometrical survey of, XXI. 324 CLACKMANNANSHIRB, VI. 749; XIII. 95— agricultural statistics, XIX. 796, 797,

798-population, 799. Cladacanthus, fossil fishes, XVII. 117. Claddagh, X. 892.

# CLA-CLA

Cladius, genus of insects, IX. 183 Cladocyclus, genus of fossil fishes, XII.

Cladodactylus, echnoderms, XXI. 986. Cladodus, genus of fossil fishes, XVII. 118.

Cladyodon, fossil reptile, XVII. 141 CLAGENFUET, VI. 751. See Klagenfurt. CLAGETT (William), VI. 751. CLAIR OBSCURE, VI. 751. See Claro-ob-

scuro. (St), lake in Canada, VI 751, 137

CLAIRAULT, or Clairaut, (Alexis-Claude), VI. 751—on universal gravitation, I 693, 780, 781 - on the connection of gravity and the figure of the earth, 851 and n—on achromatic glasses, II 93—on the retardation of Halley's comet, I. 694, 783; III. 809-on the earth's figure, I 777; IX. 552, 573-on capillary attraction, I. 731; XII 96, VI 207—his genus and character, I. 783 and n—on the problem of the three bodies, III 809; IV. 105—on the inequalities of the moon's motion, IV. 104-on the spectrum, XVI 583. Clairfayt (General), X. 87, 88

Clairville, his entomological works and system, IX. 10.

Clairvoyance, XX. 429, 487, 444—its fallacy exposed, 438, 439, 442—unworthy of credit, 446—a form of spirit-rapping, 445.

Clamant sins, XXI 201 CLAMECY, town in France, VI. 751. CLAMPING, in joinery, VL 751. CLANDESTINE, VI. 751. Clangula, genus of birds, XVI. 816.

Clans, VI. 751—spirit of clanship among the Arabs, III. 350. Clapeyron (M.), on the moving power of

heat, XX. 561.

CLAPPERTON (Hugh), African traveller, VI. 752—his discoveries in Africa, II. 210; X 477—his visit to Borgoo, V. 40 -his account of Houssa, XI. 777 et seq CLARE, in Ireland, VI. 752-agricultural statistics, XII. 515, 517.

or Claremorris, town in Mayo, VI.

usland, VI. 755; XIV 370 Claremont Palace, IX 332. CLARENCIEUX, VI 755; XI. 320. CLARENDON (Constitutions or Institutions

of), VI 755; VIII. 672.

(Earl of), VI 755. See Hyde
printing-press at Oxford, XVII 35. CLARET, VI. 755; XXI. 883-alcohol in,

890-consumption of, 891. CLARI (Giovanni Carlo Maria), VI 755. Clarias, genus of fishes, XII. 260, 262.

CLARICHORD, VI. 755.
CLARIFICATION, VI. 755—of sugar, XX 797.

CLARIGATIO, VI. 756. CLARION, VI. 756. CLARIONET, VI. 756; XV. 710 CLARISSES, order of nuns, VI 756. Clarius (Isidore), his critical edition of the

Bible, IV. 701. Clark (Bracy), on bots, IX 246; XXI 569.

(D. K.), his locomotive furnace, XX. 359—on back-pressure in steamengines, 601.

- (Edwin), on the strength of mon, I. 874—his work on the Britannia Bridge, &c., 878—on iron bridges, XII. 605, 606, 607.

(Sir James), on the climate of Madeira, XIII. 799

—— (Prof.), on the hot and cold blast processes, XII. 551.

(William), on photography by absorption of light, XVII. 551.

LARKE (Adam), LL.D., VI. 756—his Bib-

liographical Dictionary, IV. 714. (Dr), on the size and weight of infants, III. 2.

(EDWARD DANIEL), LL.D, tra veller, VI. 756-his experiments with

#### CLA-CLA

the oxyhydrogen blowpipe, IV. 794on the temperature of springs in the plain of Troy, XXL 357.

Clarke (E M.), his electripeter, XXI. 643 -his magneto-electric machine, 647. - (J. Algernon), on chalking land, II. 303.

— (Mary Anne), her connection with the Duke of York, V. 605. — (SAMUEL), VI 757.

(Dr Samuel), primus, VL 757.

(Dr Samuel), secundus, VI. 757his controversy with Leibnitz, L 139, 142, n-on the existence of a God, 141, 142-early development of his reflective powers, 1b—character and genius of, 143, 343—his controversy with Collins, -on necessity, 149-his moral doctrnes, 344—his erroneous application of the term relation, 345-difference between his system and Cudworth's, 347 -on the force of a moving body, 655 on the different kinds of deists, VII. 701-Butler's correspondence with, VI. 29-his theory on the basis of moral rectitude, XV. 554.

——— (WILLIAM), VI. 758.

CLARKSON (Thomas), VI. 758—his opposition to the slave-trade, XX. 321—on the complexion of the human species, VII. 223.

Claromontanus (Codex), XIX. 838. CLARO-OBSCURO, VI.758—engraving, VIII.
799, 880. See Chiaroscuro.

Clashbennie, fossil fishes of, XVII. 457, 124.

CLASS, VI. 758—in natural history, III. 182; V. 175—distribution of classes of plants over the globe, 222—Oken on the classes of animals, XVI 498. See Classification.

CLASSIC, VI 758--different editions of the classics, IV 709.

Classical ancient history, XI. 542—historians, 548—classical learning, XVIII. 369-romances, XIX. 256-palimpsests, XVII. 210-classical philology, 518, 522, 525; distinction between classical and comparative philology, 527; old classical philology combined with comparative grammar, 533.

- tripos examination at Cambridge. XXI. 464.

CLASSICUM, VI. 758.

Classification, natural and artificial sys-tems, III. 173—Aristotle on, 552.

of animals, III. 172 et seq., 182, 183 -by Aristotle, XIV. 122, 123--by Lin- by Aristofle, XIV. 122, 123—by Linnæus, III. 184—Virey, ib — Lamarck, 185 — Dumeni, 190 — Blainville, ib.— Macleay, 191 — Cuvier, 192 — of animalcules 194, 196 — arachides, 372 fishes, XII. 226—crustacea, VII. 540 insects, IX. 58 et seg.—importance of the teeth in, XVI. 407, 477—of zoophytes, XXI. 982, 986, 991, 1004. See the different articles on Natural His-

of plants, V. 174-systems of, 176artificial systems, ib.—Linnæan, 177— natural systems, 178—Jussieus' system, 179; XIII 25, 26—De Candolle's V. 179 Lindley's, 1b—Adanson's views on, IL

131—Cæsalpınus on, VI. 56.

of minerals, XV. 67

of rocks, XV. 129, 155.

of books, IV. 715.

of steam-engines, XX. 602. CLATHRI, VI. 758.

CLAUBERG, (John), VI. 759. CLAUDE (Jean), VI. 759; XXI. 506—his conference with Bossuet, V. 60.

LORRAINE, VI. 759; III. 712, 713
—his Liber Veritatis, 713, n.—compared with Turner, XXI. 388—specimen of sketches by, VIII. Plate.

(Sr), town of France, VI. 759. Claudet (Mr), his stereomonoscope, XX. 688.

CLAUDIA, VI. 759.

CLAUDIANUS (Claudius), Latin poet, VI.

CLAUDIUS I, Roman emperor, VL 760;

# CLA—CLE

reign of, XIX. 337—resemblance to James I of England, V. 389, n. Claudus II, Roman emperor, VI. 760; XIX. 349. CLAUSE, VI 760.

Clausel (General), governor of Algiers, IL 573, 575,

CLAUSENBURG, VI. 760. See Klausenburg. Clausilia, genus of mollusks, XV. 373 Clausius, his equation for the latent heat of steam, XX. 567

Claussen (Mr), his method of bleaching

Claussen (Mr), his method of bleaching flax, IV 768—his process for making flax-cotton, IX. 656.

CLAUSTHAL, VI 760. See Klausthal.

Clausthalite, mineral, XV 717.

Clavagella, genus of mollusks, XV. 350—

C aperta, 351—C. lata, 343—fossil, XVII 108.

CLAVARIUM, VI. 760.

Clavasius (Angelus), on blasphemy, IV.

Clavella, fossil mollusks, XVII. 110 Clavellina, genus of mollusks, XV 332 Clavellinidæ, family of mollusks, XV 332. Clavering (Capt.), his researches in Greenland, XI 41-on the fire of St Elmo, VIII. 588.

CLAVES INSULÆ, VI. 760. Claviastrinæ, echnoderms, XXI 991. CLAVICHORD and Clavictherium, VI. 760. CLAVICLE, VI. 760; III. 31. See Collarhone.

Clavicornes, family of insects, IX. 112 CLAVICYMBALUM, VI. 760, Claviger, genus of insects, IX. 153 Clavipalpi, family of insects, IX. 151. CLAVIUS (Christopher), VI. 760—on the calendar, 82 - on dialling, VIL 776

-on geometry, X. 504. CLAVUS, VI. 760; III. 167-annalis, ib. CLAY, VL 760; XV. 83, 142; XVIII 480 as used in brickmaking, V. 344—clay soils, 97—nature and kinds of, 343; XV. 83-specific gravity of, XII. 88clay books, XVIII. 431—eaten by some American tribes, IL 693—composition of potter's, V. 343—Baume's dissertation on, 344—its contraction by heat, XI. 269-its use in modelling, XIX. 844.

- burnt, as a manure, II 304. · (HENRY), American statesman, VL

(Mr), his process of manufacturing fron, XII. 544.

Claying fen lands, IL 363.

——— of sugar, XX 795.

Clay-slate, XV. 142, 153—in Scotland,
XIX. 792—analysis of, II. 391. Claystones, XV. 70, 135.

CLAYTON (Robert), D.D., VI. 760. - (Rev. John), his discovery of coal-

gas, X. 409. Shuttleworth, and Co., their direct-action horizontal steam-engine, XX. 608, 610—their portable engines, 614.

Clayton-Bulwer treaty, XV. 663. CLAZOMENÆ, town of Ionia, VI. 760coins of, XVI. 376

Cleanliness, its influence on health, XIV. 440—the best preservative from vermin, XXI. 549, 550.

Cleansing of towns, XIX. 618. CLEANTHES, Stoic philosopher, VI. 760repartee of, I. 320.

Clear (Cape), VII. 372. CLEARCHUS, VI. 760.

Cleasby (Richard), his dictionary of the old Norse or Icelandic language, XVII 528.

CLEAT. VI. 760.

Cleavage, in minerals, XV. 55—of topazes VIII 564-electricity produced by, 568

—in rocks, XV. 178. CLECKE, in heraldry, VI. 761.

CLEDGE, VI. 761.

CLEDONISMUS, VI. 761. CLEF, in music, VI. 761, 419. Cleg, insect, IX. 232

Clegg (Mr), his improvements in gas-making, X. 410—his gas-retort, 412 meter, 422—method of separating ammonia from coal-gas, 418

#### CLE-CLE

Cleirac (Mons.), on insurance, XII. 394, 395. CLEISTHENES, VI 761; IV 198.

Cleithral, in architecture, III. 508 Clethros, in architecture, III 508.

Cleland (Dr), his statistics of the people employed in the Glasgow cotton-mills, VII 451—on the mortality in Glasgow, XV 613

CLEMENS ROMANUS, VI. 761.

- (Titus Flavius), or Alexandrinus, VI. 761—on Egyptian writings, XI. 375 CLEMENT V. (Pope), VI. 761—his collection of Constitutions, 190, 762.

VII. (POPE), VL 761—his conduct in reference to the divorce of Henry VIII, VIII. 699

XI (POPE), VI. 761.

XIV (POPE), VL 761—Canova's monument to, 193—Jesuitsm suppressed by, XII. 756.

(David), on rare books, IV. 709. (M.), on steam, IX, 407

IX. 490, his epistle to the Corin-

thian chuich, ib.
CLEMENTI (Muzio), VI. 761.
CLEMENTINE, VI 762.

CLEMENTINES, Constitutions of Pope Clement V, VI. 762, 190; XVII 208. Clement's Inn, London, XII. 385 CLENARD (Nicholas), VI. 762.

Clendinning (Dr.), on the weight of the organs of the human body, III. 3.
CLEOBIS and BITON, VI 762
CLEOBULUS, one of the seven sages, VI.

762.

CLEOBURY MORTIMER, VI. 762. Cleodora, genus of mollusks, XV. 359, 360 —fossil, XVII 111.

CLEOMBROTUS, VI. 762, XXI 177 CLEOMEDES, Gleek astronomer, VI 762 on optics, XVI. 521

CLEOMENES, sculptor, VI 762.

— kings of Sparta, VI 762, IV 198; XX. 502.

Cleomenic war, II 199. CLEON, VL 762; IV. 205; XVL 251-

CLEON, VI. 762; IV. 200; AVI. 201— Aristophanes' ridicule of, VIII. 139. Cleonus, genus of meects, IX. 140 CLEOPATRA, VI. 762; VIII. 471; XIX. 326, 329, 330—her connection with Mark Antony, III. 283—manner of her death doubtful, 760—Egyptian queens of that name, VIII. 470.
Cleopatra's Needles, II. 472; VIII 497.

Cleophas, father of James the Less, IL.

CLEOSTRATUS, astronomer of Tenedos, VI. 763-his improvement of the calendar,

Clephis, Lombard king, XIII 638. Clepsina, genus of annelides, XI 307, 305 CLEPSYDRA, water-clock, VI 763; VII —D. Bernoulli on the construction of, IV. 675—Amontons on the, II. 725 Clepticus, genus of fishes, XII 267.

CLERC (Daniel le), VL 763; XIV. 462— his character of Paracelsus, L 18—his

History of Medicine, XX 814, n 2.

(JEAN LE), VI. 763—his controversy with Burman, V. 786—his acquaintance with and respect for Locke, L 106, n. 1 —his Parrhasiana, II. 788—his French New Testament, IV. 701—his edition of Menander and Philemon, V 787.

(Le), his history of worms, XXL

- (Sebastian le), engraver, VL 763. CLERCK (Charles), his entomological works, IX 5.

CLERGY, BENEFIT OF, VI. 764; III. 706
—— in Great Britain, VIII. 744—rank
of, in England, 743—in Edgar's reign, 659—burning of obnoxious books by, IV. 712—imposition of hands, XL 205 their fondness for trial by ordeal, XVI 702—generally long lived, XIV. 442—must always have existed from the times of the apostles, I, 504-reserve fund, in Canada, VI. 158-their exclusion from Parliament, XVII. 294of Austria, IV. 317—Belgium, 616, 617— Bolivia, 829—France, X. 45, 243; their

# CLE-CLI

impious adulation of Napoleon, X. 134, n.—Greece, XI. 33—Iceland, XII. 199—Ionian islands, 446—Ireland, 580—Italy, 661—Jamaica, 676—Papal States, XVII. -Russia, XIX. 526, 527, 529-Turkey, XXI. 380—Scotland, IV. 371, n, 372; V 384—Sweden, XX 865—medicine disgraced by their practice of it, 816, n 3

Clerk, tribe of insects, IX. 111. CLERK, VI 764—clerk of the irons, VII 74—period of hiring, XIV. 350—diseases to which clerks are subject, 442-of the pipe, XVII. 714—number of clerks in London, XIII 660

(Sir George), on weights and measures, XXI. 802—bill on, proposed by, 803 and n 2

Clerk-marshal and chief equerry, XI. 776 CLERKE (Capt Charles), navigator, VI 765; VII 340, 341

(JOHN, of Eldin), VI. 765-his improvements in naval tactics, XXI. 724. LERMONT, or Clermont-Ferrand, French city, VI 765—population, X. 277-tinct volcanoes of, XXL 606

- DE LODEVE, in France, VI. 765. MANUSCRIPT, VI. 765

(the), first passenger steam-boat, XX. 638

CLEROMANCY, VI. 765. Clerus, genus of insects, IX. 111. CLEVELAND, city in Ohio, VI. 765.

(JOHN), poet, VI. 766.

(Duchess of), her intimacy with

Wychelley, XXI. 941, 942.

— in Yorkshire, XXI. 957, 958—its breed of horses, II 388; XXI. 958.

CLEVES, Prussian town, VI. 766. CLEW, VI. 766. Clias (Capt.), on gymnastics, XI 169. Click, in mechanics, XIV 400. CLIENT, VI. 786; XVII 343

CLIFDEN, town in Ireland, VI. 766. Clifford's Inn, London, XII. 385 CLIFTON, suburb of Bristol, VI 766; V. 870. Moor, skirmish of, XXI. 843.

CLIMATERIC, VI. 766.
CLIMATE, VI. 766; XVII. 610—its effect on the active energies of man, II 683 -insignificant effect of the proper heat of the earth on, I 950-cause of secular change of, 1b—insular and continental, XVII. 612—zones of, IX. 70 that of Britain favourable to exertion, XIV 277-its modifying influence on animals, III 161, 182; XL 633—its influence on man, IX. 342; on trees, XVII 755; health, XIV. 443; the arts, XVII. 49; complexion, VII 223—its influence on the distribution of plants, V. 219-influenced by exhalation from the leaves of plants, 104-in geography, X. 464, 484-its dependence on geographical situation, XIV. 637; and elevation above the sea-level, XVII. 610of America, II. 673—Arabia, III 341— Asia, 736—Bengal, IV. 648—Canada, VI. 139—Chile, 543—California, 94, 96— Ceylon, 392-Denmark, VII 746ney, XVI. 719—Europe, IX. 381—England, VIII. 718—Scotland, XIX. 795— France, X. 241-Greece, XI 13-Himalayas, 442—Hindustan, 450—United States, XXI 421. See Atmosphere, States, A.L. 421. See Animosphere, Cold, Dew, Meteorology, and the geographical articles generally.

Climatius, genus of fossil fishes, XVII.

117.

Climatology, general principles of, XIV. 663. CLIMAX, VII. 1.

Climbers, order of birds, XVI 774. Climena, genus of annelides, XI. 302. CLINCE, VII. L. CLINCHER, VII. 1

CLINGING, VII. 1. CLINGING, VII. 1. CLINICAL, VII. 1—medicine, XIV. 461, 462. Clinker-build, VII. 1. Clinkstone, XV. 182, 184.

Chnocera, genus of insects, IX. 232. Clinochlore, mineral, XV. 78.

# CLI-CLO

CLINOMETER, VII. 1. Clinton, group of rocks, XV 199.

on the Pelasgi, XVII 371.

(Sir Henry), XXI. 750—his operations in the American revolutionary war, 752

Chntonite, mineral, XV 79. Chnus, genus of fishes, XII 309. CLIO, one of the Muses, VII. 1; XV. 699
—statue of, VIII Plate. - genus of mollusks, XV. 362

Clionia, fossil sponges, XVII. 93. Clipping of horses, XI. 669. Chtellaria, genus of insects, IX. 237. CLITHEROE, in Lancaster, VII. 1.

CLITOMACHUS, VII. 1. CLITOR, town of Arcadia, VII, 1 Clitoris, III 71-erectale tissue of, IL 799. CLITUMNUS, river, VII. 1; XIX. 180.

CLITUS, a Macedoman, VII. 1.
— genus of insects, IX. 145.
CLIVE (Robert), Lord, VII. 2—his transactions in India, XI. 482 et seq—accusations brought against him by General Burgoyne, V. 476—his acquittal, 477. Chvina, genus of insects, IX. 85.

CLOACE, at Rome, VII. 2-Cloaca Maxima, ib.; III 443; XIX. 358.

in comparative anatomy, III 112. 113.

CLOACINA, VII 2. Clock, VII. 2—slow improvement of, III. 706 — astronomical, IV. 153 — water-clocks, VI. 763, see Clepsydra—Bain's electric, I. 986; XXI. 644; Wheat-stone and Steinbill's, 1b.—sympathetic, I. 986—American electric-registration clocks, ib .- value of the imports of, VIII. 784—application of a clock move-ment to telescopes, XXI. 144. See Chronometer, Pendulum.

- and watch work, VII. 2. Clockmaker's compasses, VII. 221. Clodio, X. 2.

CLODIUS PULCHER (Publius), VII. 38; XIX. 325-his enmity to Cicero, VI 718. Clodomer, king of Orleans, X 4
CLOGHER, in Ireland, VII. 38; XXI 408,

Cloislinianus (Codex), XIX. 838. CLOISTER, VII. 38.

Clonakilty, town in Ireland, VIL 370, 371,

CLONMEL, in Ireland, VII. 38; XXI. 285, 288, 768—taken by Cromwell, XII. 484. Clootz (Anacharsis), X. 58, 71.

Cloquet (M), his system of anatomy, II. 767; III 73—case of a surgical opera-tion during magnetic sleep, related by, XX. 428.

Clos (La), his romances, XIX. 289. Close, in heraldry, VII. 38

Close-times, in salmon rivers, IX. 611, 612 613-seasons of, for different districts. 614, n. 1-table of, in different districts of Ireland, 621.

Clossius (Dr), his discovery of parts of the Theodosian code, VI. 744; and of a document regarding its reception by the Roman senate, 742 Closter Seven, capitulation of, V. 464.

Clot of the blood, II 780. Clotaire, king of France, X. 4

Clot-Bey, on the diseases of Egypt, VIII. 423—on the population of Egypt, 444 temperature of Egypt, 422

CLOTH, VII. 38—cloth trade in Leeds, XIII 312 et seg. See Cotton, Calender, Dyeing, Silk, Weaving, Woollen manu-

Cloth-weavers, foreign, their settlement in England, XXI. 914, 915. Cloth-workers, Company of, XXI. 918.

Clothing, flannel, IX. 654—its influence on health, XIV. 441, XIX. 611.

CLOTHO, one of the Fates, VIL 38; XVII. genus of arachnides, III. 379.

Clotilda, wife of Clovis, X. 3.
CLOUD, VII. 38; XIV. 655—nomenclaturo
of clouds, XIV. 655—colour of, 682 peculiar disposition of, on Crossfell, Vil 578-their electricity, VIII. 581.

# CLO—COA

CLOUD (St), French town, VIL 40 CLOUDBERRY, alpine plant, VII 40; XL

Clouston (Rev Charles), on the flora and climate of Orkney, XVI. 719. CLOVER, VII 40-culture of, IL 322, 327 -seed. 336.

CLOVES, VII. 40, V. 192—oil of, XVI. 496—culture of, in Amboyna, II. 660; and in Bourbon, V. 247—imports of, VIII 784

Clove-tree, IL 660. Clovewort order of plants, V 184 CLOVIO (Giorgio Giulio), VII. 40 CLOVIS I., founder of the French mon-

aichy, VII. 40; X. 2 Clowes (William), surgeon, XX. 818. CLOYNE, in Ireland, VII. 40—cathedral

Club-foot, surgical treatment of, XX. 835 Club-moss order of plants, V 216, 144 Clubs, farmers', IL 265

in London, XIII 675.
Clunch, XV. 142—used in building, XX. 712.

CLUNY, French town, VII. 40 (Hotel de), museum of, Paris, XXI 322.

CLUPEA, genus of fishes, VIL 40; XIL 237-fossil, 347 - taken by the Romans, VI. 288.

Cluperdæ, family of fishes, XIL 235-36 fossil group of, XVII. 91 Clupeonia, genus of fishes, XII 237. Clupesocidæ, family of fishes, XII 249.

Clusiaceæ, nat order of plants, V. 186. CLUSIUM, now Chiusi, city of Etruria, VII. 40. CLUSIUS, or Ecluse (Charles d'), VIL 41.

Cluthalite, mineral, XV. 75.

CLUYIER (Philip), VII 41 CLUYD, VII 41, or Clwyd, 735—vale of, ib—river, ib.

CLYDE, VII 41; XIII 174; X. 645; XIX 791—diving-bell used in improving its navigation, VIII. 66; XVI 70—im-provement of, X 651, XVI 76—dredging of the, 68, 69—physical characters of, 87—tonnage of vessels built on the, VIII. 740 - navigation of, X. 651 vessels arriving at, 1b.—canal to the Forth and, VIII. 236; XVI 55; XIX. 808—Falls of, XIII. 174; XIX. 791,

- iron-works, XII 551, 552. Clydesdale, XIII. 174. horses, II. 338; XL 662; XIII. 175. Clyers, in cattle, XXI. 571. Clymenia, fossil mollusks, XVII 112,

Clypeasteridæ, echinoderms, XXL 991 Clypeastride, fossil echinoidea, XVII. 100

CLYPEASTRAE, TOSSI CENTIONES, X. CLYTEMNESTRA, VII. 41; II. 230 Clythra, genus of msects, IX. 149. Cnidaria, polypes, XXI 1004.

Cnidon, genus of fishes, XII. 275. CNIDUS, VII. 41. CNOSSUS, or Gnossus, VII. 41—labyrinth at, XIII. 141.

COA VESTIS, VII. 42.
COACH, VII. 42 — hackney and stage coaches, 43-origin of the name, XIII

215. See Carriage, Chariot.

or Couch, VII. 43.

Mail, VII. 43. See Mail Coaches. Coach-horse, XL 658. COACHMAKING, VII. 43.

Coachman, XIII. 525. Coade's artificial stone, XX. 785. Coagulum of the blood, II. 780. COAHUILA, or Cohahuila, in Mexico, VII. 43; XIV. 713, 718, 728.

COAK, or Coke, VII. 44; X. 483; XX. 628, 631—Calvert's method of purifying, X. 320—for furnaces, 360—in iron manufacture, XII. 542--consumption of, by locomotives, XX. 358

COAL, VII. 44; XV. 128, 148-its geological position among the stratified rocks, VIL 116, 118-varieties of, 117, 118; methods of searching for, VII. 118—boring for, 119—winning, ib.
—working, 121—different methods of

# COA-COA

working, ib —quantity produced annually in the six principal coal countries, 126—extent of the coal areas in these countries, 127-its properties as fuel, X. 319-report on, as suited to the steam navy, 1b —method of purifying, 320—formation of, XV. 146—gas obtained from, X 313, 314 et seq .- wood coal of Antrim. III 284-the main cause of developing the cast-iron manufacture in Britain, VI 184—coal measures, XVII 623-distribution of, 624-its composition and decomposition, XX. 628-chemistry of the combustion of, 629, 631 -heat arising from combustion of, 630 qualities of different kinds in the United Kingdom, as adapted for steamvessels, 652-evaporative power of, 653 -treatment of, in marine furnaces, ib -specific gravity of, XII 88-brown coal, V 237; XV. 123, 149; XVII 641 cannel, XV. 123, 149—earthy, 1bslate, 1b - splint, 149 - caking, ib cherry or soft, ib -consumption of, in London, XIII. 665-influence of abundant supplies on manufactures, XIV 276—iron smelting with, XII. 543—combustion of, XX 352—composition of, ib -consumption of, by locomotives, 358—in Austria, IV. 313—in Bavaria, 517—Belgium, 624—Chili, VI. 549— Clackmannanshire, 750— Cumberland, VII.577—Derbyshire, 755—Devonshire, 763—Dumbartonshire, VIII. 235—Durham, 266—Edinburghshire, 408—England, 716, 725-Europe, IX. 387-France, X. 250—Glamorganshire, 642—Hindustan, XI. 457—Illmois, XII. 362—Iowa, 460 — Ireland, 504 — Japan, 689 — Kilkenny, XIII 84 — Lanarkshire, 178 — Lancashire, 179 — Leitrim, 327 — Monmouthshire, XV. 498—New South Wales, IV. 281-Northumberland, XVI. 299-Pennsylvania, XVII 395, 624-Prussia XVIII. 668—Russia, XIX. 548—Scotland, 804—Staffordshire, XX. 529— Stirlingshre, 702—Sumatra, 805—Sweden, 861—Tennessee, XXI 155—Tipperary, 285—Tyrone, 407—United States, 420-Vancouver's Island, 520-Virginia, 598-Whitehaven, 855-Yorkshire, 958. See Colliery, Coal Trade, and the geographical articles generally.

Coal-fish, XII. 269—fishery of, IX. 648;

XX. 113. Coal-gas, VI. 473; X. 409 et seq.—quantity yielded by different kinds of coal, 413, 414-impurities of, 415-apparatus for purifying, ib—analysis of, 430—compared with oil-gas, 428, 429—hints for the improvement of, 431-economy of, 432-its use as fuel, 322-consumption of, in London, XIII. 665.

Coal-measures, in geology, XV. 202 parative extent of their areas in Europe and America, VII. 127. See Carbon-ferous Period.

Coal-mines See Coal, Colliery. Coal-oil, X. 438.

Coal-ou, X 488.

-Glasgow, X. 650 — Newcastle, XVI.
166—Sunderland, XX. 808—number of persons engaged in, VIII. 726—proposed duty on coal exported, XXI. 60.

Coal-work. See Colliery. Coalbrook coal-mines, XXI. 285. Coalbrookdale, XX. 229, 230—iron bridge

of, XII. 575, 576, V. 363. Coalition ministry, V. 506; IX. 852; XVII. 731—its fall, V 513 COAMINGS of a ship, VII 45; XX. 190. COANZA, river in Congo, VII. 45.

Coast, change of level in that of Belgium, IV 611-defences of, IIL 695-arrangements of lights on, XIII. 481-coa lines, XVII. 584, 571-elevation of the coasts of Sweden, XX. 860—cause of volcanoes being distributed along coastlines, XXI. 606 - non-volcanic coastlines, 607.

Castle (Cape), VII. 45.
Coasting-trade, VII. 45— of Scotland, XIX. 806.

# COA-COC

COAT, or COAT OF ARMS, in heraldry, VIL 45; XL 321 - differences of, 326-of mail, VIL 45.

Coatis, or Coati mondis, quadrupeds, XIV. 155-dentition of, XVL 462.

Cob, horse, XI. 656.

COBALT, VII. 45; VI. 492; XV. 66, 246
—earthy, 112—in Devonshile, VII.
763—Cornwall, 407—in Chile, VI. 548 specific gravity of, XII. 88—magnetism

Cobaltane, XV. 115

COBBETT (William), VII. 45—his Weekly Register, XVI 189.

Cobden (Richard), his agitation against the corn-laws, V. 670.

Cobham (Lord), follower of Wycliffe, XXI. 947.

- (Elinor), VIII. 689. COBIJA, or Puerto la Mar, in Bolivia, VII 46; IV-827.

Cobitis, genus of fishes, XII 258, 256fossil, 346-C. barbatula, loach, angling for, III. 162.

COBLE, small boat, VII 46.

Coblentz, German city, VII. 46—group of rocks, XV 199—government of, XIX. 145

Cobra di capello, XVII. 634; XIX. 64in India, XI. 456; held sacred there, V. 267

COBURG, VII. 46. See Saxe-Coburg Coca, narcotic drug, VII. 46; IV. 824, V. 186—its general use in Peru, XVII. 472.

Cocceu (Samuel de), his commentary on Giotius' work De Jure Belli et Pacis, L

Coccerus (John), VII. 46. Coccinella, genus of insects, IX. 152. Coccinite, mineral, XV. 107

COCCOLIDE, genus of fossil fishes, XII. 334
COCCOLITE, VII 46; XV 81.
COCCOLOBA, genus of plants, VII 46
COCCOSEDES, genus of fossil fishes, XII
339; XVII 121, 122.

Coccotenthis, fossil cuttle-fish, XVII. 113, 114

Coccothra astes, genus of birds, XVI 761. Cocculus Indicus, bitter narcotic fruit, V. 121

Coccus, genus of insects, IX. 172 Coccya, human, III. 4, 7-of the lower animals, 76.

Coccy zus, genus of birds, XVI. 778. COCHABAMBA, in Bolivia, VII. 46; IV. 821, 826, 827

a dyestuff, VIII. 274—its nature and history, 283—its culture in Mexico, XIV. 717; in the Canary Islands, VI. 164-value of the imports of, VIII. 784.

insect, IX. 172-plant it feeds on, V. 194; XIV. 717.

Cochinealin, VIII 284 Cochlea of the ear, III 47, 98; XVII. 679. COCHLEARY, VIL 50.

Cochlicdus, genus of fossil fishes, XII. 341; XVII. 118.

Cochrane (Admiral), ochrane (Admiral), his proceedings against the United States, V. 617

(Lord), his proceedings with the Brazilian squadron, V. 287 — burning of the French ships by, in 1809, 607 exploit at Callao, XVII 467 - his management of the naval affairs of Chile, VI. 553—appointed admiral of the Greek fleet, XL 29.

— (Sir Thomas), his proceedings against the pirates of Borneo, V. 49. COCK, VII. 50—domestic, XVI. 788—Ban-kiva, 789—Jago, ib—jungle, ib.—Macartney, 790-divination by means of cocks, II. 460.

- in clocks and watches, VII 23, 29, Cock-chafer, IX. 125-modes of destroying it, XXL 549.

## COC-CŒ

Cock-dog, XX. 220. Cock-fighting, VII. 50; XVI. 789, 790. Cock-paidle, fish, XII. 306. COCK-PIT, VII. 50—in a ship of war, 51. Cockatoos, birds, XVI 783.

COCKATRICE, VII. 51; IV 486—in her-aldry, XI 334

COCKBURN (Henry Dundas), VII. 51 on Sir James Gibson-Craig, 477 - his notices of Sir H. W Moncreiff, XV. 415; of Dr Robertson, XIX. 232 - on Dr Andrew Thomson's appointment to a church in Edinburgh, XXI, 282.

- (Sir George), admiral, his edition of the Queen's Regulations and Admiralty Instructions, XVI, 104, 107. island, XVIII. 181.

COCKERMOUTH, VII. 51. Cockfield Fell trap-dyke, XV. 189. Cocklane Ghost, XII. 799.

COCKLE, VII. 52; XV. 349; IX. 765fossil cockle-shells, XVII. 107.

COCKNEY, VII. 52 COCKROACE, VII. 52; IX. 156—method

of destroying it, XXI. 549.
Cockscomb, plant, V. 203.
pyrites, XV. 115.

COCKSWAIN, VII 58—pay of, XVI 111.
COCLES (Horatius), VII 52; XVIII 366;
XIX. 298, 357, n. 2.
COCOA or Cacao, VII 52—imports of,

VIII 734-adulterations of, IX. 769tree, V. 185-in India, XI. 454-Guay-

214—in Ceylon, VI. 394, 399, 400. Cocoon, VII, 52; IX. 205, 211 et seg.

silk, XX. 290, 291, 292, 293-produce of silk cocoons, in Lombardy, XIII. 654—different kinds of silk cocoons, XX. 279 Cocos, islands, XIII. 57.

Cocote, a disease in cows, XV. 11.

COCYTUS, VII. 52. Cod, VII 52; XII 268—as an article of food, IX. 764-mode of curing, 647-migrations of, XVII. 636-red, or rock cod, XII. 269.

oil, and Cod-liver oil, XVI. 328, 493 Cod-fishery, VIII. 727—Scotch, IX. 645; XIX. 804—quantity cured and exported, IX. 646—of Newfoundland, 647; XVI 171, 172; XII 268-of Ireland, 634-

France, X. 265. Coddington (Mr), on the grooved sphere lens, XIV. 769, 770 and n .- on the periscopic achromatic sphere, 773—his improvement of the compound microscope, 776-on the spherical aberration

scope, 170—un the spinerical abeliance of lenses, 771.

Code, VII. 52; XIII. 272—Solon's, IV. 195

—Austrian, 319—Bolivian, 834—Cretan, VII. 489—of Louisiana, XIII. 272— French codes, X. 281, 182; code of conscription, VII, 297—of Alaric, II. 489— Wenetian, of maritime law, VII. 583— Menu, or Hindu code, VI. 317, 318; XI. 476—Chmese, VI. 564—Napoleon, X. 182; XIII. 272; XV. 798—Roman, X. 152; XIII. 212; XV. 150-XXXXIII.
VI. 742-Of the Two Sicilies, XX. 252
—Spanish, 467 — unternational code,
XIII. 282, 289. See Law, Legislation
CODETA, or Codeme, VII. 52; VI. 518.
Codex Ephremi, XVII. 208.
Codex Ephremi, XVII. 208.

Codices, ancient, VIII. 42-of the New Testament, XIX. 838.

Codicin, VII 53; VI. 738. Codification, XIII. 271. CODLIN, apple, VII 53; XI. 716. CODOGNO, in Lombardy, VII. 58. CODON, VII. 58.

CODRINGTON (Christopher), VII. 53.

- (Admiral), V. 651. - (General Sir William), XIX. 510.

CODRUS, last king of Athens, VIL 53; IV. 193.

Cœcilophis, genus of fishes, XII. 232. Cœcuban wine, XXI. 882.

CORFFICIENT, in algebra, VII. 53; IL 490 et seq.-in meteorology, XIV. 664. Coehorn. See Cohorn.

Colacanthi, family of fossil fishes, XIL 336, 350; XVII. 128.

# CŒ-COI

Cœlacanthus, genus of fossil fishes, XII. 336; XVIL 125 Coele, in Athens, IV. 169. Coelestius, XVIII. 477-on original sin, XXI. 203 CCLESTRIA, VIL 53; XVII. 182; XX. 903. 904. Cœlioxys, genus of insects, IX. 200. Cœlogaster, genus of fossil fishes, XII. 347 Cœlogenys, fossil species of, XVII 173 Cœlopa, genus of insects, IX. 254 Cœlorhynchus, genus of fossil fishes, XII 346; XVII. 128. CŒLUS, VIL 53. CŒMPTIO, VII. 53. CŒNA, VII 53 Ccenites, fossil animals, XVII. 98, 96.

CCENOBITE, VII. 53. Cœnomyia, genus of insects, IX. 230 Cœnosia, genus of insects, IX. 250. Cœnus, XIII 770

Coercion, one of the means by which rehgions errors have been kept up, I 523

—Acts, for Ireland, in 1822 and 1823, V.

Coesfeld, Prussian town, XIII. 132. COFFEA ARABICA, coffee-tree, VII. 53; V. 196-supposed to be originally a native of Abyssma, XVII. 628—its culture in Arabia, III. 345—Brazil, V. 294—Bourbon, 247—Ceylon, VI 399—Hayti, XI. 255—Java, XII. 705—Mexico, XIV. 717. COFFEE, VIL 54; IX. 761-chicory mixed with, ib .- Mokha coffee, III. 345; XV. 293-adulterations of, IX. 769.

Coffee-Berry, VII. 54.

—— colour, dyeing of, VIII 313.
Coffee-houses—Procope coffee-house in

Paris, VII. 104—in Damascus, 640.
Coffee-trade, VII. 54—quantity imported,
VIII. 784—effects of the reduction of the duties on coffee, XXI. 71.

COFFER, in architecture, VII. 55; III. 508
—in fortification, VII. 55.
COFFER-DAM, VII 55; XVI. 71; XX. 722 of iron, 723.

Coffey (Mr), his still, VIII. 50 COFFIN, VII. 55—impropriety of using lead coffins, XIX. 620—Egyptian, III 501—coffins kept by the Chinese in their houses, VL 571.

 (Captain J), on ambergris, II. 658
 (J. H.), on the polar winds, XVIII. 177

Coffin-bone, in the mammalia, III. 82. Cogging, in carpentry, V. 746. COGGLESHALL, Great, in Essex, VII, 55 COGNAC, French town, VII. 55-brandles of. V. 276.

COGNATE, in Scotch law, VII. 55. COGNATION, in civil law, VII. 55. Cognizances, in heraldry, XI. 387, 338. COGNOMEN, VIL 55; II 242. Cognoscenta, in painting, XVII 86. Cohahuila, Mexican state, XIV. 728. See

CORESION, VII. 56-of surfaces, XVIII. 72-strength of materials arises from, XX. 748—the doctrine of, yet a new subject, 755—great varieties of, 756 its force proportional to the area of the section perpendicular to the extending force, ib.—of metals, ib, 757—woods, ib., 758—proportion between the absolute cohesion and the relative strength of timber, 775-cohesive strength of woods and metals, 779.

of fluids, VII. 56; XII. 90—Coulomb on, VII. 464—capillary action, VI 207; XII. 90, 96; I. 781, 782; see that article.

COHOBATION, VII. 65. COHORN (Menno, Baron de), VII. 65-on fortification, IX. 815.

COHORT, VIL 65; III. 631. Corr, VIL 66.

Coignet (Michael), on navigation, XVI.

Coilia, genus of fishes, XII. 237, 213. COIMBATORE, In Hindustan, VII. 66. COMBRA, Portuguese city, VII. 66; XVIII 898—university of, 897; XXI. 492. Cons, VII. 66—ancient coins, fb.; value

### COI-COL

of Jewish, 1b-Roman and Grecian coins, 66, 67—adulteration of, II. 154—abrasion of, 47—degradation of the value of, in the sixteenth century, VIL 375, n 1—its state in the reign of Wil-ham III, VII 378—coins not signs of value; in what sense measures of value, XV. 419—gold coins of different countries, 441, 442; silver, 443, 444, 445—advantages of coined money, 418-arms on coins, XL 322. See Numismatics,

Money, Comage, Comage, VII. 68, XV 418—decimal, VII 691; XV. 430—duodecimal, ib—Boulton's improvements in, V. 246-of Ireland, XII 526-ancient modes of coming, XVI 358, 382—probable cause of the die sometimes adhering to the coin, XX 753—of tin, VII. 407—of Portugal, XVIII. 398-coming of false money, XIV 427. See Numismatics, Com.

Coipu, in zoology, XIV. 186. Coir, VII. 95—ropes, XIX. 401 Coster (Volcher), his anatomical researches, II. 760

Conton Arthur, cromlech, XVII. 374. Cone, VII. 95. See Coak.

(Sir Edward), VII 95-

XVIII. 403, 404. Cokum, or Kokum, oil, XVI. 496. Col, mountain pass, XVII. 591. Colaba, in Hindustan, VII 96; V 1. - (Angrias territory), VII. 97 COLAIR LAKE, in Hindustan, VII 97.

COLAPOOR, VII. 97. Colaptes, genus of birds, XVI 777 COLAR, town in Hindustan, VII 97 COLARBASUS, a Gnostic, VII. 97 Colaris, genus of birds, XVI 765. Colaspis, genus of insects, IX. 149. Colberg, in Pomerania, VII 97.

COLBERT (Jean Baptiste), margus of Seg-nelay, VII. 97; X. 34—his commercal regulations, 257—manufactures un-proved by, 251; XVIII. 215—dyeing encouraged by, VIII. 274—his forma-tion of the Academy of Sciences, II 63 -his ordinance for publishing bills of mortality in Paris, XV, 617-his exertions to improve the French navy, XX. 134 - woollen manufactures promoted

by, XXL 920. Colby (Colonel), employed on the trigo-nometrical survey of Scotland, IX. 551 -his contrivance for measuring the base line, 554; XVIII. 703; XXI. 332. Colchagua, in Chili, VI 547.

COLCHESTER, in Essex, VII 98: IX. 336. COLCINSTER, IN ESSEX, VII 98; IX. 336.
—— (Lord) See Abbot (Charles).
Colchicacem, nat order of plants, V. 213.
COLCINGUM AUTUMMALE, VII, 98, V. 79,
218—alkalpid from, XIV. 439

order of plants, V 213. Colours, in Asia Minor, VII 98. COLCOTHAR, VII 99. COLD, VII. 99—reflection of, I. 762—pul-

sations of, in the air, VI. 783; instrument for indicating these, ib, 784-Dr Wollaston's mode of producing artificial, VII. 544—Leslie's, XIII. 345—Dr Curne on the medical effects of, VII. 549-alleged coldness of the moon's rays, 766—preservative effects of, IX 767—radiation of cold, XI 264—means of producing, 271, 275—from evapora-tion, VI. 459; IX. 413—death from, XIV. 421—its effects on the spine, XVII. 702—produced by voltanc elec-tricity, XXI. 626—in Tibet, 247— Siberia, XIX. 549—in the polar regions, XVIII. 178, 179—ebullition produced by, XX. 558. See Congelation, Heat, Ice, Polar Regions.

a disease. See Catarrh. Cold-Bath-Fields prison, XVIII. 572. Colden (Cadwallader), VII. 108. Coldingham, VII. 108—priory, IV. 681 fishings at, 680. Coldstream, VIL 108 COLE (William), botanist, VII. 108.

### COL-COL

Cole (Robert), on roller-spinning, XX, Cole-fish, XII. 269 See Coal-fish

Colebrookdale, XX. 229—early use of coal at, VII 116; iron' ore of, XX. 230iron-stone China, 1b

COLEBROOKE (Henry Thomas), VII. 108his translation of a Hindoo mathe-matical work, II. 487—his comparison between the Indian algebraists and Diophantus, ib -on the Sanscrit gram-marian Pânini, XVII, 519-his edition of the Amara-Cosha, 527-contributions to philology, 529, 541

Coleoptera, order of msects, IX. 25, 73. Coleorhiza, in botany, V. 77.
Coleraine, in Londonderry, VII. 109;

XIII. 680, 682

COLERIDGE (Samuel Taylor), VII 109his mistake as to the Parva Naturalia of Aristotle, L. 443-his explanation of Luther's visions, III. 312, n—on the German drama, VIII 167-68—his connection with the drama alluded to, 168 -his remark on Shakspeare, XI. 37-on association of ideas, XIV 596, n 3; XV. 286—on the thinking principle, XIV. 617, n. 1—on Milton, XV. 22—his definition of genius, X. 450—his newspaper writings, XVI 185—on personality, XIV. 617, n. 1—on poetry, XVIII 95—poetry of, 126—his opinion of George Fox, 714—on Rabelais, 742—on Shelley, XX, 102, 104—his opinion of Whitaker, XXI. 851, n-on Prof Wilson's waste of talent, 878-his friendship with Wordsworth, 930, 931. COLEROON RIVER, VII. 112; VI 243

Colerus (Jean), on the Life of Spinoza, L. 264, XX 513, 514.

COLESHILL, in Warwick, VII. 112 COLET (John), VII. 112. Coleworts, XI 787 Colgong, in Hindustan, VII. 112. Cohas, genus of insects, IX. 207. COLIBERTS, in law, VII 112.
Cohe, painters, XIV 434.
\_\_\_\_\_\_ in horses, XXI 566, 565

COLIGNI (Gaspard de), VII. 112, X 32. Colima, Mexican state, XIV 728, 718 Colina, hot springs of, in Chile, VI. 543. Colisa, genus of fishes, XII. 290 Coliseum, VII. 112—in Rome, II. 730,

731, III 469, 515-buildings constructed from its materials, XIX. 366—in London, XIII. 668.

Colius, genus of birds, XVI 762 COLL, island, VIL 112; XI 278. - Castle, XX 843

Collado (Luis), on gunnery, XI. 103, 114, 136.

Colladon (Dr), on electro-magnetism, VIII. 601—on the compressibility of liquids, XII. 78

COLLAR, VII 112-Knights of the, ib in mechanics, friction of, XIV. 406 Collar-bone, in man, III 31-the mammalia, 80—birds, 85—reptiles, 88. Collard (M. Royer), X. 196, 198—Reid's

philosophy taught by him in Paris, I 404—his attempts to render speculative philosophy popular in France, ib -his speech on the liberty of the press, X.

COLLATE, VII 113. COLLATERAL, VIL 113. COLLATION, in law, VII 113. COLLE (Raffaellino da), VIL 113. COLLECT, VIL 113.

College, VII. 118—of Surgeons and Physicians, Edinburgh, VIII. 400; London, XIII. 672.

of Justice, in Scotland, VIL 114;

VIII 395—institution of, XIX 771.
Colleges, seats of learning, VII. 113, XXI.
443 et seq , in the University of Paris,
447; Bologna, 450; Oxford, 455, 459; Cambridge, 462, 463, 465; St Andrews, 478—in Bengal, IV. 652—in Massachusetts, XIV. 240—New York, XVI. 230— United States, XXI. 423, 498.

COLLEGIANTS, a religious sect, VII. 115.

### COL-COL

Collegiate Church, VIL 115 COLLET, VII. 115.

Colletes, genus of insects, IX. 198 Colletta (General), his history of the kingdom of Naples, XX 261. Colliciati, ammonites, XVII 113

Collier (Arthur), on the non-existence of an external world, I. 168, n 3, 274

(Sir F. A.), his attack on the pirates of Borneo, V. 49.

- (Jeremy), VII. 115morality of the stage, VIII. 163; XXL 173, 516-Congreve's contest with, VII.

Collier's filter, IX. 581, 582 combing machine, XXI. 924.
Colliers, laws relating to, XIV 349—their former servile state, XX 320.

COLLIERY, VII. 116—choke-damp and firedamp m, 643—means of protection against these, 125—Davy's safety-lamp, 671; Stephenson's, I. 883—collieries in Lanarkshire, XIII. 175; in Lancashire, Cheshire, and North Wales, 179. See Coal.

COLLIMATION, line of, VII, 127-error of.

Collin (Mr), his fire-escape, XIII. 438 Collingwood (Cuthbert, Lord), VII 127
—his conduct at the battle of Cape St Vincent, V. 560; and at Trafalgar, 598.

COLLINS (Anthony), VII. 129—his controversy with Dr Clarke, I 144; VI. 757—on the doctrine of necessity, I. 148 on the impossibility of liberty, 265; his notion of it the same as that of Hobbes, 268—Locke's regard for, 263—on the tenets of the Epicureans and Stoics, 266-Bentley's answer to his Discourse of Freethinking, IV. 659.

on book-keeping, V. 15. (Samuel), on comparative anatomy,

(WILLIAM), poet, VII. 129-merits of his poetry, XVIII. 124. (WILLIAM), landscape painter, VII.

(W. Wilkie), his account of the

pilchard fishery, IX. 643, 644. Collinson (Peter), naturalist, VII. 130.

(Capt), his expedition in search

of Sir J Franklin, X. 474; XVIII. 174 spars of Franklin's vessels found by, X. 299, n. COLLIQUAMENTUM, VIL 130

Collision, VII 130 of vessels at sea, VII, 130.

Colliuris, genus of msects, IX. 79. Collodio-albumen process, in photography, XVII. 549.

COLLODION, VII. 131; XI 95-processes in photography, XVII 547, 548 Collosphæriæ, zoophytes, XXI 1008. Collumpton, in Devonshire, VII. 132.

COLLUTRUS, VII. 132. COLLYRIDIANS, VII. 132.

COLLYRIUM, eye-salve, VII. 132; XXI 577 and n.

COLMAN (George), the elder, VII 132, XXI 174-his comedies, VIII 166. his John Bull, VIII. 168.

COLMAR, city of France, VII. 132; XIX. 143.

Colmate, Italian mode of draining, XXI.

Colne, town in Lancaster, VII. 132.

river, XI 359; XIV. 807. Colobata, genus of insects, IX. 253 Colobadus, genus of fossil fishes, XII 337. COLOCYNTH, VII. 132; V. 193

COLOGNA, VII. 138.
COLOGNA, VII. 138—early printing at,
XVIII 582—the Rhine at, XIX. 144—

government of, 145.

Cololites, fossils, XVII. 101.

Colontes, rossis, XVII. 101.

Colombat, on stammering, XX. 594.

COLOMBIA, VII. 133; II. 702, 703—history of, IV. 819 et seg.—now divided into three states, New Granada, Venezuela, and Ecuador, VII. 187; which seewines of, XXI. 888, map of, Plate.

COLOMBO, capital of Ceylon, VII. 124;

### COL-COL

VI. 391 et seq.—diurnal change of temperature at, XIV 670. Colomesiana, IL 739.

COLON, VIL 134-anatomy of, III. 61comparative anatomy of, 111.

in grammar, VIL 134; XVIII. 685 VII. 134-colonel-lieutenant, heutenant-colonel, ib - price of commission and pay, 202 Coloni, Roman, XIX. 318.

Colonial period of the history of the United States, XXI, 432

- tamber, XXI. 278-wool, 907; imports and exports of, 911, 912; prices current of, 912, 913.

- churches, in connection with the Established Church of Scotland, XVIII. 494.

-Universities, XXI. 490 Colonists of the United States, XXL 435 COLONNA, VII. 134

- CAPE, VIL 134, IV. 191; XX. 808.

(GIOVANNI PAOLO), VII 134. Palace, XIX. 369

(VITTORIA), VII 184. COLONNADE, in architecture, VIL 184. Colonodus, genus of fossil fishes, XVII

COLONY, VIL 134-British colonies, 147; population of, VIII 755, postal arrangements for, XVIII 406, 417—modification of the system of trade with, in 1826, V. 643-number of vessels registered at the different British, VIII 740 -foreign, VII. 149-evils of the Spanish colonial system, XIV 707, 708—bishops in the colonies, IV. 734—life assurance in the British colonies, XII 413—colonies of France, X. 263—Denmark, VII 745—Holland, XI 582—Portugal, XVIII 398-Roman, XIX. 307reforms in the slave-law of, from 1823 to 1830, XX. 324—effects of war on the English colonies, XXI. 434 - of the United States and those of Great Britain, 1b -colonial period in the his-

tory of the United States, 432 Солорном, in Asia Minor, VII 151—in Bibliography, ib , XVIII Plate. COLOPHONITE, mineral, VIL 151; XV. 85. COLOPHONY, VIL 151

Coloquintida, or bitter apple, V 193 COLORADO, Mexican river, VII 151; XVII

604, 777, COLORATURA, IN MUSIC. VII. 151. Colossæ, VII 151

Colosseum. See Coliseum COLOSSIANS, Epistle to the, VII 151. Colossochelys, fossil tortoise, XVII. 640. Colossus, VII. 151—of Rhodes, ib.; VI.

422; XIX. 148, composed of bronze, VII 350; probably a light-house, XIII. 463—of Cardinal Borromeo, III 673 COLOSTRUM, VII. 152 See Beestings

Colot (Germain), French surgeon, XX.

COLOUR, VII. 152, VI 657; XIII. 453-Knight's doctrine as to the beauty of colours, IV. 550, 551-their beauty derived from association, 551-primary, resolvable into red, green, and violet, L 751-periodical, VL 646; XVI. 598 -mistaken notions regarding colour the cause of much error in philosophy, L 64-Dr Reid on, 65, n. 2-connection between it and extension and figure, 65-its varieties useful in enabling us to distinguish the figures and distances of bodies, 66-Addison on the colouring of nature, 273—separation of, by refraction, VI. 644, 658—colours of the aurora borealis, IV. 245—of halos and parhelia, VI. 645—of the rainbow, ib — of thin plates, 646; XVI. 599—of double plates, VI. 647, XVI. 620, 621—of supernumerary rambows and glories, VI. 648—of striated substances, 649—of mirrors and thick plates, 650; XVI. 619of deflected light, VI. 650—of diffracted light, 651-of mixed plates, 652; XVI 623 - of doubly-refracting substances, VI. 655-of clouds, VII 39; XIV 682 -of the electric spark, VIII. 545 - of

### COL-COL

stars, IV. 85—of leaves, V. 107—of metals, VI. 482; XVI 686—plants, VII. 152, V. 151—of quadrupeds, XIV. 85, 86-of thorough-bred horses, XI of hounds, 769-minerals, XV. 58 -fashion in colours, IX. 487-of heat, I. 956-of light, XVI 578-of the atmosphere, 691-of the sea, XVII. 574-influence of electricity on, VIII. 597-used in mourning dresses, XV 667-of fibres. XVI. 622—of thin crystallised plates in polarized light, 648 - colours in crystals with one and two axes, 666, 667-of elliptical and circular polarization, 685-of natural bodies, 692-of dispersed light within solid and fluid bodies. 693-produced by the unequal action of light on theey es, 696—brilliancy of, in marine productions of the tropics, XVII 635-of the cameleon, XIX. 37pents, 43-resemblance of the colours of birds to those of the places they inhabit, XX. 226-of wool, XXI. 905-coloured rings formed on metallic plates by voltaic currents, 632

Colour-blindness, VII 153; XVI 696, XVII. 678—Dr Dalton's case, VII. 637 -Dr George Wilson's researches on, XXI. 874.

Colouring, in phrenology, XVII. 563. of sculpture, XIX. 844, 865 and n Colours, perception of,—are the blind capable of distinguishing them by touch? IV. 773, 777—incapacity of distinguishing, VII. 153.
—in heraldry, VII. 152; XI 324

in the human species, VII. 152, 222: II. 677.

m painting, VII 152—colours used by the ancients, 671—in drawing, VIII. 174-discharge of, in dyeing, 316-in pottery and porcelain, XVIII. 443—printing in, 555—printing of coloured engravings, XIV. 784. See Painting. in glass-staining, X. 668

Colquhoun (Dr), on the consumption of corn in the United Kingdom, in 1814, VII. 395—his analysis of Lanarkshire iron ore, XII 540.

on the police of London, XVIII.

on mesmensm, XX. 414—on phrenomagnetism, 441.

Colsa See Colza

COLT, VII. 154; XI 636 et seq.

- (Colonel), his manufacture of revolvers, XI. 100, 102

Coltness fron-works, XII. 549.
Coluber, serpents, VII. 154, XIX. 56—fossil species, XVII. 158—teeth of, XVI. 431, 432-colubraform serpents, XIX. 63

preaching in Germany, X. 578-his residence in Iona, XII. 441—the Christianızer of Scotland, XIX. 744

island in the Firth of Forth, XII 267.

COLUMBANUS, Irish monk, VII. 154; X. 578.

COLUMBARIUM, VII 154.

Columbella, genus of mollusks, XV. 386. Columbellina, fossil mollusks, XVII 109 COLUMBIA, U. S., VII. 154, XXI 419. College, New York, XVI. 230;

XXI. 493.

— in South Carolina, VII. 154. — in Pennsylvania, VII 155. — RIVER, VII. 155; XVII 604—chmate of, II. 674-fur stations on, X.

Columbic acid, VI. 494. Columbite, mineral, XV. 109. COLUMBIUM, metal, VII. 155; VI. 494. COLUMBRETES, islands, VII. 155. COLUMBUS (Christopher), VII. 155; XX. 465—his voyages, X. 470, 471—visits to

### COL-COM

Cuba, VII. 565-his discovery of the West Indian Islands, IL 699; and of South America, ib; of Jamaica, XII. 672: Hayti, XI. 255; Honduras, 609; of the variation of the needle, XIV. 2.

OLUMBUS (Diego), governor of Jamaica, XII. 672

- capital of Ohio, VII. 159; XVI. 490, 491,

n Georgia, VII. 159

anatomist, II. 759, 761.
COLUMBLIA (L J Moderatus), VII. 159 on irrigation, XII. 621-on the cultivation of the vine, XXI. 882. in botany, V. 135.

Columelliaceæ, nat order of plants, V. 198 COLUMN, VII 159-different kinds named from their use, ib -in architecture, III. 508—Doric, 463, 475, 477—Ionic, 465, 475, 477—Corinthian, 466, 473, 477 considered with reference to architec tural composition, 486-building of columns, V. 740-strength of, VI. 250; XX. 758, 771-none found among Assyrian remains, III. 500; reason of this, 1b .- construction of wooden, XII 811iron columns, their superiority, XX.

COLUMNARIUM, VII 160. COLURES, VII. 160, IV. 2. Colwith Force, waterfall, XXI. 842. COLYBA, or Colybus, VII. 160. Colydium, genus of insects, IX. 142. Colymbetes, genus of insects, IX. 101. Colymbus, genus of birds, XVL 809. Column, town in Devonshire, VIL 160. Colyttus, in Athens, IV. 169 Colza oil, II. 335, XVI. 495-its advantage for lighthouse lamps, XIII. 480. COMA, VII. 160, XVII. 701—death by, 703.

- BERENICES, constellation, VII. 160, IV. 661.

COMACCHIO, town in Italy, VII. 160. COMANA, in Cappadocia, VII. 160; VI 223.

——— in Pontus, VII 160. Comarca di Roma, legation, XVII 243. Comaster, genus of zoophytes, XXI 995. Comatula, echmoderms, XXI. 995—fossil, XVII 98

COMAYAGUA, in Central America, VII. 160, XI 613, 614—plam of, 611. Comb, VII 160.

- or coomb, a corn measure, VII 160 COMBACONUM, in India, VII. 160 COMBAT, VII. 160; VI. 611, 409; XVI 702.

Combativeness, XVII. 562

fallacy in mesmeric experiments, XX. 440.

COMBER, or Cumber, VII 160.

——— (Mr), on the produce of wheat in Britain, VII. 380 Combernere (Lord), his capture of Bhurt-

pore, IV 694. COMBINATION, VII. 160—laws of chemical VI. 439; in definite proportions, 441;

by volumes, 447—among workpeople, XIV. 280, 348, 350. - in mathematics, VII. 166. See

Probability. - laws, repeal of the, V. 640-effects of that measure, 643.

Combinations, in mechanics, XIV. 390, 391—aggregate, 400. Combing of wool, XXI. 923, 924. Combretaceæ, nat. order of plants, V. 191

Combrune (Mr), on brewing, V. 319. Combs of bees, IV. 577-their durability, 583-Buffon's theory of the formation

of, 578. COMBUST, in astronomy, VII. 166

COMBUSTION, VII. 166-Lavoisier's theory DMBUSTION, VII. 168—Lawniser's theory of, I 982; modified by Davy, 971—spontaneous, causes of, XIV. 427—electricity developed in, VIII. 567—air necessary to, XVIII. 81—oxygen and air necessary to, XX. 358—products of,

#### COM-COM

352-of coal, ib. - heat liberated by, 353—chemistry of the combustion of coal, 629—heat arising from that of coal and coke, 630-physical conditions of the complete combustion of coal, 631. Combustion, spontaneous, of the human body, VII. 166

GOMEDY, VII. 166—ancient, VIII. 139—Greek, ib—middle and new, 140—Italian, 148—French, 156—English, 157 et seq—genteel, 185—of intringe, ib—of the fourth period of the English drama, 166-German, 167-of Ariosto, III. 530-of Plautus, XVIII. 2, 3-immoral tendency of, in the time of Charles IL, XXI. 171.

Comephorus, genus of fishes, XII. 306, 307.

COMERCOLLY, town in Bengal, VII. 166. COMET, VII. 167; IV. 4, 75, 94, I. 784, 855—orbits of, IV. 75—their appearance and constitution, 77-account of the most remarkable comets that have appeared during the present century, 94, 95-disturbance of their orbits by the action of the larger planets, 107-just notions of some of the ancients regarding, I. 568—methods for discovering the orbits of, 784—number of, IV. 79— Milne's Essay on, I. 784, n. 1--notions of the Chaldeans respecting, III 782—Lulande on, XIII. 160—Lambert on, 167— Halley's comet, I. 782, 855; III. 804, 809; IV. 76, 94; its peculiar features, I. 856; table of its returns, 1b -Encke's, IV. 76, 94; I. 856—Biela's, IV. 76, 94; I. 858, 859—Gambart's, ib—comets of 1811 and 1843, 859—comet of Faye, ib.

steam-boat, XX. 638; X. 650. Comfrey, plant, V. 201. prickly, forage plant, IL 329. COMINES (Philippe de), VII 181. town of Belgium, VIL 182. Comino, island, XIV. 116.

COMITATUS, in law, VII 182. COMITIA, Roman assemblies, VII. 182, XIX. 296, 816; in Dublin University, XXI. 488.

COMITIALIS MORBUS, VII. 184. COMMA, VII. 184; XVIII. 685—in music, VII. 184.

Commagene, province of Syria, XX. 904. Commander-in-chief, naval, XVI. 103. Commanders, military, choice of, XXL

COMMANDERY, VII. 184. Commandments (the Ten), VII. 689. See Decalogue. Commelynacese, nat. order of plants, V.

COMMENDAM, VII 184, IV. 647

COMMENSURABLE, VII. 184; X. 517-numbers, VII. 184—in power—surds, ib.

Commerce, VII. 184—history of, ib.—
principles of, 192—fluctuations of, in

the present age, 199-influence of the cotton-manufacture on, 454 - evils of the exclusive system, 455-credit, 487 -promoted by the crusades, 533of Parliament for the benefit of, in 1823, V. 636; and m 1825, 643-commercial distress of 1825, ib -civilisation promoted by, IX. 395-characters of abbreviations in, VL 419-prejudice against, among the Greeks and Romans, XVIII. 212 and n. 1—beneficial results of, 230-employment of capital in, 236 —distinguished from agriculture and manufactures, 246—of Asia, III. 754, manufactures, 246—of Assa, 111. 754, 755, 756—England, VIII. 782—Scotland, XIX. 806—France, X. 257—Belgnum, IV. 625—Demmark, VII. 748—India, XI. 459—Holland, 584—China, VI. 589—of the Mediterranean, XIV. 470— Sweden, XX. 862-Switzerland, 890-United States, XXI. 426. See the diffe-

rent states, countries, &c.

chamber of, in Belgium, IV 626

Manchester, XIV. 256—Dublin, VIII

226-Glasgow, X. 654.

Commercial Docks, London, XIII. 661. COMMERCY, town of France, VII. 201.

#### COM—COM

Commewina, river in Guiana, VII. 201. COMMINATION, VII. 201. COMMINUTION, VII 201. COMMIRE (John), VII. 201.

Commissariat department in the British army, III. 664—mismanagement of, in the Crimea, XIX. 506.

COMMISSARY, VII, 201.

- court, in Scotland, VII 201. COMMISSION AND COMMISSIONER, VII. 201 - of bankrupt, VII. 201-in commerce, ib; III. 596-of lunacy, VII

sions in British army, 204.

Commissioners for the consolidation of English law, XIII. 273 of national education in Ireland,

VIII. 223.

COMMISSURE, VII. 204. COMMITMENT, VII. 204. COMMITTEE, VII. 204.

Commodities, taxes on, XXI. 57, 58-ad nalorem taxes on, ib .- occasion smuggling, ib -customs-duties on, 59-kinds of, that might be charged with export duties, 60-extent to which taxes should be laid on, 69; should vary with the price of, 70.

COMMODORE, VII. 204, 339; XVI. 108, COMMODUS (L. Aurelius), Roman emperor, VII 204—his reign, XIX. 345

VII 204—Inis reigii, AIA, 345

COMMON, VII. 204—In grammar, ib.; X

747—arithmetic, VII. 204—place-book,
ib—pleas, 205; VIII. 785.

—— ilaw, VII. 204.

—— law, XIII. 269.

PRAYER, VII 205, XIII 517. sense, I. 403.

terms, in logic, XIII. 569—quantity of, 583-predication through, 584, 585. COMMONALTY, VII 205. See Civil State. COMMONER. VII. 205.

COMMONS (House of), VII 205; VIII. 768, 770; X 737; XVII. 289, 293 et seq—clerk of, VI. 764—ventilation of, VII. 670; XXI 540

COMMONTY, in Scotch law, VII. 205. COMMONWEALTH, VII. 205 — history of England during the, V. 413 et seq post-office under the, XVIII. 404—decay of the mercantile navy during the, XX. 130.

COMMUNE, VII. 205, COMMUNE, VII. 205,

COMMUNIBUS LOCIS, VII. 205—annis, ib. Communicants and non-communicants,

division of Christians into, I. 509. COMMUNICATING, in theology, VII. 205. See Supper of the Lord, Communion. COMMUNICATION, VII. 205. COMMUNION, VII. 205-service, 206,

COMMUNIS, in botany, VII. 205.

COMMUNISM, VII. 206. Communists, their mischievous schemes

regarding property, XVIII. 228, n. 4.
COMMUNITY, VII. 217—arms of communities, XI. 322, See Corporation.
Commutation of tithe, XXI 64, COMMENA, VII. 217; III. 213. Comnenus (Alexius), VII. 316. Como, lake of, VII. 217; XII. 687; XIII.

province and city, VII, 217, 226, Comonfort (Ignacio), president of the Mexican republic, XIV. 714.

COMORES, or Comoro Islands, VII. 217; IL 229.

COMORIN, Cape, VII. 217; XXI. 326. Comorn, Hungarian city, XIII. 129. COMPACE, VII, 217,

Companions in arms, VI. 622.

COMPANY, VII. 217 — commercial companies, 218; XVII. 316—land draining, VIII. 131\*—companies en commandite, in France, XVII. 318 and n. 3. See

Joint-stock Companies, COMPARATIVE ANATOMY, VII. 218: III. 74 -province of, IL 748-cultivated by Aristotle, 750-revival of, 763-individutals by whom it has been cultivated curing the eighteenth century, 768-

### COM-COM

Cuvier's labours in, VII. 604, 605; John and William Hunter's, XIL 27, 30 See Animal Kingdom, and the different zoological articles.

COMPARATIVE DEGREE, VII. 218; X. 775,

- philology, XVII 527.

COMPARISON, VII. 218—in rhetoric, ib—in grammar, X 775, 790—phrenological faculty of, XVII. 563.

COMPASS (mariner's), VII 221; XVI. 12, XX. 27, 121, 124—invention of the L. 740; III. 706; X. 630; XIV. 1; XVI 2-action of auroia borealis on, IV. 247 -Coulomb on its improvement, VII 461; one described by him, 462-effects of lightning on, VIII 600-points of the, X. 482—in globes, 485—discovery of the dip and variation of the needle, XIV. 2, 3; effect of non on the needle at different degrees of heat, 36-Condamine's description of avariation compass, VII. 230-error of, from attraction of iron in ships, XIV. 9, 90; I. 745, 990—dip of needle, XIV. 57—variation of the needle, I. 990; VII. 692; XIV. 49; XVI. 3, 12, 49—changes in its variation, XIV. 51, 52, 58-form and construction of needle, 78—common and azimuth compasses, 78, 79—variation compass, 80—deviation of the, XVI. 13—compass of proportion, XX. 30—compass observatory, XXI. 926.
COMPASS-DIAIS, VII. 221.

COMPASSES, VII 221-various kinds of, 1b. tangent compass, L 983—to describe an ellipsis by, XX. 726.
 Compassionate fund, XVI 118

Compensation reservoir, Pentland hills, TTT 337.

Compensation-balance of watches, VII. 29-31—compensation pendulums, XVII.

COMPREGNE, in France, VII 222. COMPITALIA, Roman festival, VII 222. COMPLEMENT, VII 222; XXI. 838. COMPLEX, VII 222

COMPLEXION, VII. 222-original of the human species, IL 121—of the American races, 677-of the Japanese, XII. 690. COMPLENE, VII. 225.

COMPLUTENSIAN POLYGLOT, VII 225; IV. 697; XVIII, 266; XIX. 837, COMPLUVIUM, VII. 225; III. 472.

Compositæ, nat order of plants, V 196 region of the arborescent, 228; XVII.

COMPOSITE, VII 225-numbers, ib .- order of architecture, ib.; IIL 451, 469, 475,

477, 487.

COMPOSITION, VII. 225 - of ideas - in grammar-in law, 1b; IL 416-in logic, VII. 225-in music, 226, XV. 739-in the fine arts, VII. 226-in printing, ib.; XVIII 539-in architecture, III. 485—of motion, VIII. 333—of pressures, 335—of forces, VI. 254; VIII.

(Literary), VII. 225 - Condillac on, 236—history considered as a form of, XI. 545—Playfair's habits of, XVIII -poetical diction, 93-letter-writing, 327.

Compositor, XVIII. 539, 541 and n. 2, 543. COMPOST, VIL 226; II. 802.

Compostella (St James of), order of knighthood, VII 226; XIX. 628. —— town in Spain, VII. 226; XIX. 627. - town in Mexico, VII. 226.

COMPOUND, VIL 226-motion, numbers, ratio, ib.

INTEREST, VII. 226; XII 432tables of increase of L.1 at, III, 258, 254; XII. 434-present value of L.1 at, 485.

COMPREHENSION, VII 226—in rhetoric, ib.
——scheme of, VII, 226; V. 429.
Compressibility, of water, II. 102; XII. 77; I. 976-of air, XVIII. 28, 51 et seq. —is a property of all bodies, XX. 751 important consequences of this property, 764.

Compression, failure of timber from, XX.

COM-CON

Compte (Auguste), his system of posi-tivism, VII. 211; XVIII. 401—on law, as ultimately depending on the same causes as customary law, XIII, 260—on causes as customary iaw, AIII, 200—on social science, 263—on the limits of legislative action, 264—meaning attached to the word *physics* by, XVII 647.

COMPTON (Henry), bishop of London, VII.

(SPENCER-JOSHUA-ABOYNE), Mar-

quis of Northampton, VII 226 COMPTONITE, mineral, VII 226; XV 75. Comptroller of the household, XI. 774, Compurgation, ordeal by, XIII. 22 COMPURGATOR, VII 226

Comme, in Perthshire, XVII 457-earth-

quakes at, 616. COMUM, city of Gaul, VII. 226. COMUS, VII 227. Comyn (John), XIX. 755. CONANT (Dr John), VII. 227. CONATUS, VII 227 Conca (Sebastiano), VII. 227 Concan, in India, VII. 227. Concatenation, VII 227 CONCAVE, VII. 227, 338. CONCENTAINA, town in Spain, VII. 228.
CONCENTRATION, VII. 228.
CONCENTRATION, VII. 228.
CONCENTRATION, VII. 228; VIII. 371—lenses,

XIV 770. CONCEPCION, in Chile, VII. 228; VI 542. 543, 547

Concepticle, in botany, V. 147.

Conception, VII. 228—in physiology, 1b—in metaphysics, XIV. 587—symbolical and intuitive, 589.

· (ummaculate), of the virgin, VII. 228 . XII. 365. Concepts, in logic, the law of, XIII. 582-

concept proper, XIV. 589—concept of God, XXI. 184.

Conceptualism, XVI. 284. Concept, VII. 228—of princes, V 540

Conchifera extinct genera of, XVII 115. Conchinerate scalar general of, XVII. 144.
Concentre, fossil shell, VII. 228.
Conceodo, VII. 228—construction of the,
III. 143—of Nicomedes, 143; X 501,

Conchology, VII. 228; XV. 319 See Mollusca, Palæontology Conchorhynchus, fossil mollusks, XVII

CONCHYLIA, VII 228 CONCIATOR, VII, 228, Conclamatio, X. 344. CONCLAVE, VII 228.

CONCLUSION, in logic, VII. 228. CONCORD, in New Hampshire, North America, VII. 228; XVL 174.

town and river in Massachussetts, VII, 228; XIV. 340-first collision with the British forces at, in 1775, XXI, 749,

temple of, in Rome, XIX. 359 CONCORDANCE, verbal index to the Bible, VII. 228-Calasio's, VL 66-Cruden's, VII 523.

CONCORDAT, VII. 228; X. 267—between Pius VII. and Ferdinand I, XX. 255. CONCORDIA, goddess, VII 228.

Concours, method of mixed examinations among the French, IX. 425.

CONCRETE, VII. 229, 329--definition, his-

tory, and use of, XX. 721.

Concretion, VII. 229—in pathology,
XVII. 691—in the duct of animals, XXI, 564.

CONCUBINAGE, VII. 229 CONDAMINE (Charles Marie de la), VII. 229; I. 772, 773-his measurement of the length of a degree, IX. 549-experiments on sound, II. 104-on the Ama-

CONDAPULY, town in Hindustan, VII. 231 Conné (Louis de Bourbon, Prince of), VII. 231; X, 34.

zon. 650.

— town of France, VII 233.
— sur Nomeau, VII. 233.
Condensation, VII. 233—in steam-engines, I. 868—of vapours, VII 39, see
Evaporation—of water, XIV. 646—of gas, X. 415-of air, XVIII. 30.

CON-CON

CONDENSER, VII. 233-of electricity, VIII. 614—in distillation, 49—of steam-engine, L 868; XX. 576, 589 et seq, 654 -best vacuum for, 655--contents of, ib Condensing steam-engines, XX. 602

CONDER, VIL 233.

CONDILLAC (E. Bonnot de), VII. 283—his erroneous notions of vision, I. 164—on the origin of human knowledge, 173, n 1-his commentary on Locke, 1b, 379causes of the popularity of his works, ib -commonly most successful in describing mental phenomena when he follows Locke, 174-most valuable part of his works, ib-the ladical error of his system, 176-influence of his theories in misleading his contemporaries, 177-M. de Bonald on his ments and style, 177, n 1-on sensation, 380omits to distinguish between the percipient and emotive part of human nature, ib -on association of ideas, XIV. 596-on the deaf and dumb, VII 676his merits as a philosopher, L 174 et seq Condiments, IX. 765; VIII 17.

CONDITIONAL, VII. 287 - conjunctions prepositions—syllogism, ib

CONDOM, town of France, VII 237. CONDOR, bird, VII. 238; XVI 738; XVII. 633—in Chile, VI. 549—in Ecuadoi, VIII. 387—among the Himalayas, XI 456—in Peru, XVII. 473—in La Plata, 778-in Patagonia, 335.

Condorcanqui (Jose Gabriel), IV 831 CONDORCET (M - J - A - Nicolas-Caritat, Marquis of), VII 238; X. 83—on ieligious Machiavelism, I 23—on Descartes, Bacon, and Galileo, 56—his intimacy with Cabanis, VI 44—constitution framed by, X. 79-on Duhamel's style, VIII, 233-on the construction of lenses, XIX XIII 472 - on probability,

CONDOTTIERI, VII. 239; XII 650.

Condrieu, French town, VII 239. Conduction, electrical, VIII 539; XXI. 621, 622—influence of heat in promoting, VIII 540, 541-Faraday's new law of, 533, 542, I. 978-Ohm's law of, 982 -principal laws of, 983

of heat, I. 946. See Heat nervous, theory of, XVIII 653 CONDUCTORS OF ELECTRICITY, VII. 239; VIII. 540, 608, 609; XXI. 95, 650—electrical resistance of, 96.

Conduit-pipes, motion of water in, XII.

Condurrite, mineral, XV. 117. Condules, III, 34.

CONDYLURA, IN ZOOLOGY, VII. 239; XIV.

Condy's deodorizing fluid, XIX. 621. CONE, VII. 239, 283; X. 540, 558—development of the curve surface of, 492; XII 807; XX. 727 — speed-cones, in mechanics, XIV. 398—mensuration of, 513-its use in masonry, XX. 726-sections of, 727 See Conic Sections.

CONEGLIANO, Italian city, VII. 239. Coneine, VI. 518. Cones of eruption in volcanoes, XXI. 604

-craterless cones, ib.—coneless craters, ib.—new cones, rapid formation of,

—— in botany, V. 115, 139. Coney-fish, XII. 269. CONFARREATIO, VII 239.

Confectionary, adulterations of, IX. 770. Confederacy, plundering, at Bombay, V. 2. CONFEDERATION OF THE RHINE, VII. 239, X. 142, 580.

- Swiss, IX. 498, XX. 884, 885 -

Germanic, X. 597; IX. 400. Confervaceæ, sub-order of algæ, V. 218 reproductive organs of, 147.

CONFERVÆ, a division of algæ, VII., 240; V. 68—in mineral waters, XV. 38, n.

CONFESSION, VII. 240-popish doctrine of, XVIII. 836.

Confession of Faith, VIL 240; L 502 —rejected by the Independents, XII. 370-of Augsburg, IV. 240; XIII 736;

### CON—CON

XVIII. 823 - Westminster Confession of Faith, XIX. 781; its doctrines on predestination, XVIII. 478 - of the Druses, XX. 908.

CONFESSIONAL, VII 241. CONFESSOR, VII. 241 CONFIGURATION, VII 241

Confirmation, in an ecclesiastical sense VIL 241

CONFLAGRATION, VIL 241-of the world, 1b. See Fire.

CONFOLENS, town of France, VII. 241. CONFORMITY, VII 241. CONFUCIUS, VII 241.—his works, VI. 560

-miraculous birth of, XV 761 CONFUSION OF TONGUES, VII 245. Sec

Tongues, Babel.

Congé d'elire, VIL 245, IV 733 Congelation, VII 245, 103 — artificial, 104, 106, 107, 545; XIII 345; XI 275 — of water, 269 — of mercury, VII 107; VI 352—freezing mixtures, VII 102; VI 353; XI 275 — Kirwan's method of calculating the point of perpetual, VI 772—in hot climates, owing to radiation, IX. 415—electricity of, VIII 566 See Cold.

CONGER, species of eel, VIL 245; IX. 764; XII, 232

Congerndæ, family of fishes, XIL 232. Congermuræna, genus of fishes, XIL 232 Congestion, XVII 689, 691.

Congrus, ancient haund measure, VII. Congleton, town in Cheshire, VII. 245.

viaduct, XVIII. 764
Conghani (P.), his work on insects, IX.

Conglomerate rock, XV. 141. Congo, county in Africa, VII. 245; II 227—ants in, III 263.

or Zaire, African river, VII, 247 II 214—Captain Tuckey's expedition to, 210; VII 247.

Congoon, Persian town, VII 247

Congosoco gold-mines, V 299. Congou, tea, XXI. 86. CONGREGATION, VII. 247-lords of the,

XIX. 779. CONGREGATIONALISTS, VII 247: IX. 394their idea of ordination, XVI. 704.

CONGRESS, VIL 247; XXI. 698-of the United States, 435; powers of, 429; salaries of the members, 1b

CONGREVE (William), VII 247, XXI. 173, 518, 519-his merits as a dramatist, VIII 162, 163—his character of Dryden, 203—his dramatic reading, XXI. 172-

his reply to Collier, 516.

(Sii William), VII. 248—inventor of congreve rockets, ib; his right to be regarded as their inventor denied, III 698-his improvements of lockets,

ib -first used by him in war, 699. matches, XIV. 352. CONGRUITY, VII. 248. Cont, or Cuneo, in Italy, VII. 248

CONIA, the poisonous principle of hemlock, VII 248; XIV. 439; XI. 311; XVIII

Coniasaurus, fossil reptile, XVII 152. CONIC SECTIONS, VII. 249—parabola, 252—ellipse, 258—hyperbola, 269—cone and its sections, 283-curvature of, 285areas of, 289-arches from, XX. 725-Apollonius on, III. 300, 301—Condamine on, VII. 230—connection of the doctrines of astronomy with, X. 505-Dr R. Simson on, XX 800.

Conical barometer, IV. 454. refraction, L 918 See Refraction. Conicera, genus of insects, IX, 258, Conicera, gents of macets, IX 226. Conicerativodontes, VII. 294. Conidæ, fossil mollusks, XVII. 110.

CONIFERÆ, nat. order of plants, VII. 294; V. 209—embryogeny in, 157—fossil, 234, 235, 237—turpentine and rosin from, XIX. 88—oil of turpentine and of

juniper from, XVI. 496.
CONTROSTRES, VII. 294; XVI. 759. Conisburgh Castle, Yorkshire, XXI. 959. Coniston rocks, XV. 197, 198; XXI. 841. Conistonite, mineral, XV 125

#### CON—CON

Conium maculatum, hemlock, V 195, XI. 311, XIV. 438; XVII 702 CONJEVERAM, town in India, VII. 294: XI 485

CONJUGATE DIAMETER, VIL. 294. Conjugation, in grammar, VII. 294. Conjunction, in astronomy, VII 294. - in grammar, VIL 294, X 779, 791

—in Egyptian grammar, XI. 425. Conjuration, VII 294. Connaraceæ, nat order of plants, V. 190.

CONNAUGHT, VII 294.

CONNECTICUT, state, VII 294, XXI. 419-first settlers in, 433—wines of, 888. - river, VIL 296, 294; XIV. 340; 7L 173—lake, ib

XVI. 173 Connecting-rod, in steam-engines, XX. 591, 646,

Connectives, in grammar, X. 791. Connemara, in Ireland, X. 388, 389. CONNOISSEUR, VII. 296

CONNOR (Bernard), VII. 296
—— bishopric of, III. 283. Conocardium, genus of mollusks, XV. 349
—fossil, XVII. 107.

Conoclypeus, fossil echinoidea, XVII 100. Conodon, genus of fishes, XII. 285. Conodonts, fossils, XVII 115

Conodus, genus of fossil fishes, XIL 336. CONOID, in geometry, VII 296 Conolly (Dr), his mode of treating the

insane, XIV. 528 CONON, Athenian general, VIL 296; IV

- of Samos, VII. 296, III. 790. river, XVL 87, XIX. 425-pearls in, 426

Conopalpus, genus of insects, IX. 132. Conophaga, genus of birds, XVI 749 Conors, genus of insects, VII 296, IX. 244. Conopsariæ, family of insects, IX. 244. Conorbis, fossil mollusks, XVII 110. Conoteuthis, fossil cuttle-fish, XVII. 114. Conovulus, genus of mollusks, XV. 375 Conquest, in law, VII. 296.

CONRAD II, Emperor of Germany, VII.

III, Emperor of Germany, VII 296—second crusade headed by, 525—or Conradin, VII. 296; XX. 257, 258

CONSANGUINITY, VII. 296.

Conscience, VII. 297; XV. 558—Aristotle's view of, III. 564—Hutcheson's definition of, I. 364; first called by him a moral sense, ib .- formation of, from various elements, 424—regarded as the foundation of moral distinctions, XV. 544-proof of the existence of God from the operations of, XXI 187. See Ethical Philosophy. Conscientiousness, sentiment of, XVII.

Consciousness, VII. 297-presentative or intuitive, XIV. 560—phenomena of, XIII. 567, XIV 556—forms of, 561 matter of intuitive, 562-of personality, 584—representative or reflective, ib. philosophy of the realities of, 603theories of the real not founded on, 611-the real as given in, 613-the modes of, not cognisable by logic, XIII. 567—original data of, violated by Pan-theism, XVII. 237—a universal law of mind, XIX. 111—primary distributions of the elementary modes of, 1b

CONSCRIPT, VII 297. Conscription, VII. 297—French code of, ib.; X. 271—under Napoleon I., III. 642 and n. 2.

CONSECRATION, VII. 298-of bishops, IV.

Consent, as constituting marriage in Scotland, XIL 51.

CONSENTES, VII 298; VIII. 28. Consequence, in logic, VII. 298. Consequent, in geometry, X. 517. 

of Arts and Measures, Paris, XXI.

### CON-CON

CONSISTENTES, VII. 298.
CONSISTORY, VII. 298—college of Cardinals at Rome, 1h.

court, VIL 298.

in the reformed church, VIL 298; XVIII. 485

Console, in architecture, VII. 298; III. 508

Consols, VII. 298; VIII. 752

CONSONANCE, in music, VII. 299
CONSONANT, VII. 299—consonants in the ancient Egyptian language, XI. 415pronunciation of, XVII. 679-in short

hand writing, XX. 676.

CONSPIRACY—CONSPIRATOR, VII 299.

CONSTABLE, VII. 299—of France, ib-Lord High Constable of England, 1bof Scotland, 1b,-inferior constables, 1b (Archibald), VII 299—Sir Walter Scott's connection with, XIX. 821, 822.

- (JOHN), landscape painter, VII. 299 Constabulary force of Ireland, XIL 525,

XVIII. 206, 207-Constabulary Act of 1836, 206.

CONSTANCE, VII. 300.

- Lake of, VII 300; X. 585; XX. 889; XXI 242—influx of the Rhine, XIX 144—climate, XXI 938—wines from the banks of, ib -fish, ib.

Constans, Roman emperor, VII. 303-his visit to Britain, XIX 742.

CONSTANT (Benjamin), VIL 300; X. 193. - (C. F), his work on insects, IX. 21.

CONSTANTIA, VII. 300.

- wine, XXI. 887; alcohol in, 889. CONSTANTINA, or Constantine, in Algiers, VII. 300; VI. 734; II. 574, 575—town taken by General Valée, 575.

— wife of Gallus Cæsar, VII. 304. CONSTANTINE THE GREAT, VII. 300, 302reign of, XIX. 352-his vision, ib -his proceedings in Britain, V. 380--his ımprovement of Byzantum, VI. 43—his hbrary, XIII 385—state of Jerusalem and the Jews under, XII 734, 776state of art in his reign, XVII. 58-Spain under, XX. 459—probably born at York, XXI 955

of Carthage, XIV. 458.

copronymus, XII 642.

II., Roman emperor, VII. 303. Russian grand duke, XIX. 492.

Scottish kings so named, XIX. 745. -dome of the church of St Sophia at, 402, 411 — military establishments in, 659—taken by the Latins in 1204, VII. 318-great fire at, in the fifth century, 311; and in 1203, 317-unsuccessful British expedition against, V. 603—bazaars of, IV. 525—taken and plundered by the crusaders, VII. 318, 526; and by the Turks, 321; XXI 368—era of, VI. 670—commerce of, VII. 186; XXI. 384—taken by the Turks in 1458, VII. 321-rise of ecclesiastical power at, XI 33—obelisks at, 387 and n. 2, 3 -hbraries, XIII 385, 428-plague at, XVII 748, 749-foundation of, XIX. 353—Russian expeditions against, 469, -ancient sculpture once preserved at, 859-revolution at, in 1808, XXL 373—schools or colleges at, 881—press and newspapers, 383—public libraries, ib.—astronomical instruments in the mosques of, 1b — manufactures, 1b — climate, 377—shipping, 384—introduction of the silk-worm at, XX. 286.

Constantinopolitan History, VII. 302.
Constantins, Roman emperor, VII. 303—
reign of, XIX. 351—his war with the
Persians, VII. 307.

Chlorus), XIX. 350—his death at York, V. 380; XXL 955.

CONSTELLATION, VII. 322; IV. 12, 79—Dupus on the constellations, VIII. 263. onstatuent Assembly, in France, X. 64, 65; XXI. 11.

CONSTITUTION, VII. 322 - of a country,

# CON-CON

VIII. 756-the British, 758 et seq-French, of 1791, X. 62; of 1795, 95-German, of 1848, 581—Hungarian, XII. 15—of the United States, XXI. 437—of the different states forming the Union, 431—of universities, 450 et seq

Constitution, propositions of, in logic, XIII. 587, 589, 606.

Constitutions (Apostolical), VII. 322. Constriction, action of the muscles in, III.

CONSTRUCTOR muscles, VII. 322; III. 39. Construction, VII 322, I 874—in architecture, III 490—in navigation, XVI. 14—of harbours, XI. 221—of ships, XVI. 96—use of iron in, XII. 570 of walls, XX. 72L

Constructiveness, XVII. 562. Consualia, Roman festival, VII. 333. CONSUBSTANTIAL, VII. 333.

Consubstantiation, VII. 333; XIII. 740. Consuegra, Spanish town, VII. 333. Consul, mercantile, VII. 335—stations of

British consuls, with their salaries, 336 -vice-consuls, 335.
Roman, VII 333; XIX 298, 316-

mode of investing with the power of dictator, 317-consular armies, III. 630, n 3-consular government in France. X. 116

Consumption, a disease. See Phthisis.

of wealth, XVIII. 256—of the pre-

cious metals, 465—of wines, XXI 891. Contagion, VII 337—dependence of the plugue on, XVII 750—has been supposed to originate from animalcules, XXI, 975.

CONTARINI (Andrea), VII 337. - (Nic.), his works on insects, IX. 21.

Contempt of Court, IV. 185. Conti (Abbé), IX. 673 Continent, X. 483; XVII 571—mean ele-

vation of continents, 590.

Continental missions to foreign countries. XV. 270; sum of money expended on,

system of Napoleon, X. 128, 144. - universities, XXL 492

CONTINGENT, VII. 337. CONTINUED BASS, in music, VII 337. Continuity, law of, first mentioned by Galileo in reasoning on motion, I 592 Contorsions of beds, in geology, XV. 169

Contourniated, VII. 337.
Contraband, VII. 337—articles contra-

band of war, XVI. 156. Contractility of muscles, II. 822; XVII. 652, 670, 671-of leaves, V. 108.

Contracts, in law, XIII. 257-in life assurance, XII. 393, 407—duty of keeping, faithfully, XV. 567.

Contradiction, law of, in logic, XIII. 573.

Contraposition, inference by, XIII. 602. Contre, in heraldry, VIL 337. Contrition, VIL 337.

CONTROL, VII. 337. CONTROLLER, VII. 337. Conularia, fossil mollusks, XVII 109, 111. Conurus, genus of birds, XVL 781.

Conus, genus of mollusks, XV. 368, 385 Conventicle, VIL 337—act of parliament against, in 1670, V. 428.

Convents, in France, X. 267-in Jerusalem, XII. 745, 747.

CONVENTUAL, VIL 338 CONVENTUS JURIDIOI, VIL 338.

Converging, or convergent lines and series, VIL 338. CONVERSANO, city of Naples, VII. 338. Conversations, published collections of, IL

Converse, in mathematics, VII 338. Conversa, Jews converted to Christianity, VII. 338.

Conversion, in theology, XXI. 218-puri-

tanical notions of, VIII. 415.
in logic, XIII. 605, 606
in calico printing, VIII. 317.

CONVERT, VIL 338

# CON-COO

CONVEX and Convexity, VIL 338, 227. CONVEYANCING, VII. 338

Convicts, in New South Wales, IV 271; XVIII. 576, 577, 579-the assignment system, 577, 578 - female, 585 - discharged, 1b -agitation concerning, at the Cape of Good Hope in 1849, X. 713 —in Norfolk island, XVI. 291, Tasma-

nia, XXI. 30, 33. See Prison. Convocation, VII. 338, VIII. 743, 766-in universities, XXI. 457, 467, 471 CONVOLUTION, VIL 338.

Convolutions of the brain, in man, III. 52 in brutes, 104 — their relation to the intellect of animals, 176.

Convolvulaceæ, nat. order of plants, V

CONVOY, VII 339-order of, at sea, XXI.

CONWAY, ID Wales, VII 339; VI 55 tubular bridge, XII 609-castle of, II. 28 See Aberconway river, VL 54; VII 735—vale of,

ıħ.

(General), his motion for disco tinuing the American war, V 499 COOCH BAHAR, in Hindustan, VIL 339

COOK (Capt. James), VII. 339—his voyages, X. 475, IV. 419—his survey of the Aleutian islands, II. 465-on the island of Unalashka, 465—his success in preserving the health of his crews, XIX. 602-on New Holland, IV 253 New Guinea, 262; New Caledonia, 266 New Zealand, 1b, Kerguelan's Land, 268—his visit to the Friendly Islands, XVIIL 276; to the Harvey and Society Islands, 278, 279-his arctic and antarc tic voyages, 170, 181.

(Lieut), his life-buoy, XIII 448

(Colonel), on hounds and hunting, XI 765 et seq; XIL 85 et seq

(Mr), his life-raft, XIII. 499. county in Australia, IV. 278, 282. COOKE (Sir Anthony), VIL 341

(Fothergill), his share in the introduction of the electrical telegraph, I 986, n 2

(G Frederick), actor, XXI 176 and Wheatstone's telegraphic system. XXI 100, 111

Cookery, different kinds of, IX. 765-its importance, VIII. 25-Krunitz on, 26its influence on health, XIV. 440, XIX. 611-David Hume's humorous account of his proficiency m, XII 8, n.

Cooks, diseases of, XIV. 443. COOKSTOWN, in Ireland, VIL 341; XXI 408, 409,

Coolers, Egyptian, VII. 101.

Coolies, in Gujerat, XL 91, 92, 466-in Jamaica, XII 677 Cooling, law of, I. 945, 952—Dulong and Petit's correction of the Newtonian law

of, 1b .- velocity of, not simply as the excess of heat, 953-effect of contact

of air on the rate of, ib. Coomassie, in Africa, VII. 341; III. 725. Coomhola grit series of rocks, XV 201. COOMTA, in Hindustan, VII. 341.

Coonia, XL 778. Coonoor, in Hindustan, VII. 341. Coopang, town in Timor, XXI. 281

COOPER, VII. 341-cooperage at Deptford. VIII. 80.

(ANTONY ASELEY), first earl of Shaftesbury, VII. 342—member of the Cabal administration, V 425—prosecuted by Charles II. 431-his flight to Amsterdam, and death, 488.

(ANTHONY ASHLEY), third earl of Shaftesbury, VII 342-on Locke's theory of innate ideas, I 118; XIV 601, n. 4—his Characteristics, I 348—his merits and defects as a writer, ib. 849 -his Moralists and Inquiry concerning Virtue, 349—his ethical views, 350—o the relation of religion to morality, 150 on beauty, IV 538 on our approval of what is right, and disapproval of what is wrong, XV 559—on Bishop Burnet, V. 792, 793—on Shakspeare's style, XX. 72.

### COO-COP

COOPER (Sir Astley), VII. 343 - his experiments on digestion, VIII. 21

- (JAMES FENIMORE), American novelist. VII 344-character of his novels, XIX. 281

(JOHN GILBERT), VIL 344 (SAMUEL), miniature painter, VIL 344; XVII. 77.

(SAMUEL), FRS., VII 344 or Couper (THOMAS), bishop, VIL

Cooper's catalogue of stars, IV 95.

mation of, 547, 559-solid co-ordinate geometry, 555

Coorg, in Hindustan, VII 344 Coote (Sir Eyre), VII 345; XI 485, 493 et sea

(Sir Charles), XX. 331—his sanguin ary proceedings in Ireland, XII 482 COOTEHILL, town in Ireland, VII. 345.

Coots, birds, XVI 808 COPAE, town of Bœotia, VII. 345 COPATBA, or Balsam of Copaiva, VII 345;

V 190, VI 518 Corais, lake in Bœotia, VII 345, XI 12 COPAL, VII 345; XIX. 88—fossil, XV. 124—copal varnish, XXI. 526. See

Varnish. Copaline, XV 124 Copan, ruins of, II 697 COPARCENARY, VII. 346.
COPARCENERS, VII 346
COPE, VII 346 See Coping.

(Sir John), defeated by Prince

Charles at Prestonpans, V 460; XVIII. 510

COPENHAGEN, VII 346-Royal Academy of Sciences at, II 66—port of, IV 404 -attacked by the British in 1801, V. 580; VII 742, X 120, XVI 137; and in 1807, V. 602; VII 742; X 148—besieged by the Swedes in 1659, VII. 740, XX 852; and by Charles XII., VII. 741; XX. 853-treaty of, VII 740 -mean annual temperature of, 746railways connected with, 748—University of, 750; XXI 492—literature of, VII 750—naval arsenal, VIII 79— libraries at, XIII 426—Royal Society of Northern Antiquarians at. XX. 118

COPERNICAN SYSTEM, VII 348, 349, IV 54-its effects on all branches of philosophy, I 20—fully established by Kepler and Galileo, 608—represented as contrary to Scripture, X 377.

COPERRICUS (Nicolas), VII 348; I 600,

XVIII 158-his discovery of the true theory of the planetary motions, L 20 -publication and reception of his Astronomia Instaurata, 601; III. 797reference to gravitation in his writings, I. 673, IV. 220—his astronomical discoveries, III. 797—his planetary system, IV. 54—his works, VII. 350—epitaph on, IX. 283

COPHTI, Cophts, or Copts, VII. 350; IL. 218: VIII. 449

COPHTIC, or Coptic language, VII 350, VIII. 441; XI 273; XIII. 210, 218—alphabet, II 607, 615, XI 412—bibles, IV 700; XIX. 839—identity of, with the language of ancient Egypt, XI. 374, 410-characteristics of, 374letters unknown to Greek and Latin, 413.

- LITURGIES, VII 350. Copiapite, mineral, XV. 97. COPTAPO, in Chile, VII. 350—mines of, VI 548; XV. 235; XVII. 622—climate of, VI. 544.

COPIATA, VIL 350.

Coping, in architecture, III. 508—of walls, V. 736, 739; XI 700. Copland (Prof), his alleged introduction into Britain of the use of chlorine in

into Britain of the use of chlorine in bleaching, IV. 785. Copper, VII 350; VI. 496; XV. 66— native, II4, 238—annealing of, III. 219—its under assaying, 770—its com-pounds with zinc and tin, V. 277— sheathing of ships with, 519; VII. 672;

### COP-COR

XVI 96; XX. 174; XXI. 685-for the fastenings of ships, XX. 174—sulphate of, rings from, XXI. 633—how to ascertain its purity in coins, II 155-protects wood in sea-water from the attacks of Lamnoria terebrans, VII. 542quantity of, manufactured at Portsmouth, VIII 83—black oxide of, used as a mordant, 280—engraving on, 799 value of imports of, 734-used to give a green colour to preserves, IX. 770—specific gravity of, XII. 88—magnetism of, XIV. 27-its poisonous quality, 433culmary utensils of, 440-blue copper, XV 102-variegated or purple, 117gray, 120—in sea-water, XVII 572, 574 -distribution of, 621—as a covering for roofs, XIX 374—cohesion and strength of, XX. 756—decays when in contact with iron, 179. See Copper-mines, Copperplates Copper, black, XV. 112

- mines, XV. 238 et seq. glesea, III 146—Australia, IV. 295, XV. 238—Scotland, XIX. 790—in Caernar-

vonshire, VI. 54-Chile, 548-Cork, VII 371-Cornwall, 407, XV 239-Cuba, VII. 566-Cumberland, 577-England, VIII. 726—Europe, IX. 386—Nepaul, XVI 143—Hindustan, XI 457—Hungary, XII. 17-of Monriquira, IV. 809gan, XII 506—Japan, 689—Michi-gan, XIV 739—Russia, XIX 517—Swe-den, XX 862—Switzerland, 889—Waterford, XXI 769. See the different countries, paragraph on minerals.

money, XV. 418. Copper-blende, XV 120. Copper-glance, XV. 118. Copper-green, XV 102 Copper-mica, XV 103. Copper-nickel, XV 116. Copper-ores, red, XV. 112—gray, 120. Copper-powder, for bronzing, V 6' Copper-pyrites, VI 496; XV. 116. Copper-salts, XV. 102 COPPER-SMELTING, VII. 351-at Swansea,

COPPERAS, VII. 854; XV 97—a preventive of dry rot, VIII. 212. See Iron (sulphate of).

Copperdiaspore, mineral, XV 103. Coppermine River, X 473; XL 791; XVIII 169.

Copperplates, printing from, VI 325 XVIII 520—ink for printing with, XII 384-multiplication of by voltaic electricity, XXL 636

COPPICE, or copse, VII 354, XVII 760 Copris, genus of insects, IX. 120

COPROLITE, VII 354—composition of, II 416-use of, in forming manures, 300, 415.

Coprophagi, section of insects, IX. 118. Coprophilus, genus of insects, IX. 104. Coptic language See Cophtic. Corros, ancient town of the Thebais, VII 354.

Copts See Cophti.
Copx, VII 354.
Copying machines, XIV. 415.

Copyists of books, IV. 706 COPYRIGHT, VIL. 355; XVIII. 505-attempts to obtain an international law of, with America, V. 32—sums paid for the copyright of dramatic pieces, XXI

in the Arts and Designs, VII 362. in designs for manufactures, VII. 369.

Coquebert (A. J.), his works on insects, ÎX. 8.

Coques (Gonzalez), VII. 362. Coquet, river, XVI. 87. Coquimbite, mineral, XV. 97.

Coquindeo, in Chile, VIL 362; VI 548, 547—terraces round the bay of, 542—earthquake at, in 1849, 543—climate, 544 mines near, 548

COR CAROLI-Hydræ-Leonis, VII. 862. CORA, city of Latium, VII. 362-temple at, III. 444, 476.

### COR-COR

CORACESIUM, fortress in Culicia, VII 362 CORACHIE, VII. 362 See Kurrachee. Cotacias, genus of birds, XVI. 765 Coracite, mineral, XV. 111. CORACLE, small kind of boat, VIL 363;

XV. 499; XX 117.

CORAH, or Korah, in Hindustan, VII. 363. CORAL, VII 363; XX. 247—manufactures of, at Marseilles, XIV 316—specific gra-vity of, XII 88—fossil corals, XVII. 96 -principal recent works on colals, XXI. 1004, n 1

uslands and reefs, XV. 143, 217; XVII 583; XVIII 282—in the Red Sea, 818-reef-building corals, XVII 96the Australasian Sea, IV. 269; XV. 148
—coral animals, XVII 588, XXI. 1003.
—rag, or coralline colite, XV. 208

Sea, XVII. 576. Coralliaria, polypes, XXI. 1004. Corallinaceæ, hthophytes, XXI 1009 Corallinæ, polypes, XXI 1004. Cotalline Crag, XV. 214, 215-of Suffolk,

bryozoa contained in, XVII. 98. CORAM (Captain Thomas), VII. 363— Foundling Hospital founded by, XIII

CORAN (AL), VIL 363 See Alcoran Corax, genus of fossil fishes, XII. 341; XVII 118.

Coray (Diamant), XIII 180. CORBAN, VII 363 CORBEIL, town of France, VII 363. CORBELLS, in fortification, VII 363. CORBEL, in aichitecture, VII. 363; III.

----- sous, VII 363. Corbet (Richard), VII 363. Corbett's mode of heating hot-houses, XI.

Corbicula, fossil mellusks, XVII. 107. Corbis, genus of mollusks, XV. 350-fossil XVII. 107.

Corbula, genus of mollusks, XV 350— fossil XVII 108 CORCULUM of seeds, VII. 363.

CORCYRA, now Corfu, VII 363-of, IV 204-coins of, XVI 370 -sedition Corcyrean war, IV 202, XII 454. Corp, VII 364. See Choid. ——— wood, VII 364

CORDAGE, VII. 364 See Rope-making CORDATE, or healt-shaped, VII 364; V.

CORDAY D'ARMANS (Marie-Anne-Charlotte), VII 364, X 79; XIV. 295 CORDELIER, VII. 365; VI 226—Alcoran of, II 456

a political club, VII. 365, 649; X.

CORDEMOI (Gerald de), VII. 365 Cordiaceæ, nat. order of plants, V. 201. Cordiente, mineral, XV 88.

CORDELLERAS, VIL 365; III 128; II. 669; XVII. 592-in Bolivia, IV. 822; in Colombia, VII 138—nn Chile, VI. 542—their geology, ib.—mines, XV. 235—snow-line on, XIV. 660, XVII. 602 in Mexico, XIV. 714—in Venezuela, XXI. 535 See Andes. Cordiner (Mr), his description of the

obelisk at Forres, IX. 787. Cordiners, VII. 366.

CORDON, in fortification, VII. 365; IX.

CORDOVA, or Cordoba, in Spain, VII 365; III. 124-Moorish rulers of, XX. 461. - in La Plata, XVIL 778.

——— (General), XX. 479. Cords, XIV 397—friction of, 407. Corduan (Tour de) lighthouse, XIII 464,

468; I. 907. CORDUS (Valerius), VII. 366. CORDWANTERS, VII. 368—origin of the name, III. 324

Cordyla, genus of insects, IX. 229. Cordylura, genus of insects, IX. 251.

Cordylus, genus of reptiles, XIX. 31. Core, disease in domestic animals, XXI.

COREA, peninsula of Asia, VII. 866-language of, XIII. 217. Coregonus, genus of fishes, XII. 245, 243.

419

### COR-COR

CORELLI (Arcangelo), VII 366. CORENZIO (Belisario), VIL 366. Corethra, genus of insects, IX. 225. Coreus, genus of insects, IX. 162. Corfe castle, VIII 112 CORFINIUM, VII 366. CORFU, VII 367; XII. 450, 456—climate of, 444—expenditure of Great Britain upon, 458

Corracee, family of insects, IX. 258 CORIANDER, genus of plants, VII. 367; V 195, XI 745—seed, II. 337—culti-

vated in Essex, IX. 337. Coricus, genus of fishes, XII 267 Corigliano, town of Naples, VII. 367 Corigliano, in Hindustan, VII 367. CORINNA, Greek poetess, VII 367

CORINTH. VIL 367-ruins of a temple at, III. 440-war with the Carthaginians in Sicily, VL 283-war with the Corcyræans, IV. 202-monaichy of, XV 413 -comage of, XVL 357—sack of, by the Romans, XIX. 314—Theban forces repulsed in an attack upon, XXI. 178 grapes of currants of, XL 16

- ISTHMUS of, VII. 369; XI 12. CORINTHIAN, VII. 369 - brass, V. 278; VII 368

- order of architecture, VIL 369-its origin, III 442-Roman, 444, 469, 473 -Romans fond of, 444-modern Italian, 451, 477-Greek, 461, 466-remarks on 486.

CORINTHYANS, Epistles to the, VIL 369 Como (Bernardino), historian, VII 369 CORIOLANO, three engiavers on wood, VII 369.

CORIOLANUS (Casus Marcius), VII. 369; XIX. 299.

CORIOLI, ancient Latin city, VIL 369 Conolis on the relation between the pres sure and temperature of steam, XX. 565

Cornon of the skin, II 834-of the mucous membiane, 836

Corixa, genus of insects, IX. 166. CORK, VIL 369-specific gravity of, XII 89

- oak, V. 82-bark used in tanning, XIII. 306-value of imports of, VIII. 734.

– ın Ireland, VII 369—harbour, XII. -taken by William the Thud, 490 -savings-bank, XIX. 669

- Cove of VIII. 468. See Queen-s

- (Earls of). See Boyle. CORK-JACKET, VIL 369, XIII. 440-corkbelt, 1b

Corked wines, XXL 889. Corking, in carpentry, V. 746. CORLEONE, town in Sicily, VII. 373. Corliss Steam-engine Company, XX. 606. Cormac, Irish king, XII. 464. Cormogens, plants, V. 142

CORMONTAIGNE, French engineer, VIL. 378—on fortification, IX. 815—his system, 820.

Cormorants, XVI 813 - fishing with, in China, VI 589.

Corms, a kind of tuber in plants, V 79. Conn, VII. 373-not eaten by ants, III 268 - estimate of the consumption of the various kinds of, in the United Kingdom, in 1852-53, VII. 396. See Corn-laws, Corn-trade, Agriculture, Barley, Wheat, &c. Corn-crake, bird, XVI. 807—shooting of,

XX. 216.

CORN-LAWS, VIL 374; II 254, 258-principles of, VII. 385—their effects on agriculture, VIII. 723—effect of their repeal on the cotton-trade, XIV. 254-Act of Parliament in 1814, V. 618-Lord Londonderry's act in 1823, 636-modifying acts in 1826, 645-Mr Canning's bill in 1827, 650-act of 1828, 651-Mr C. Grant's bill, ib -Sir Robert Peel's modification of the sliding-scale, 669repeal of the, 670; IL 264, XVII 365
—Anti-Corn-law League XIV. 256—
James Wilson on, XXI 87b.
CORN-TRADF, VII. 374—British, 395—fo-

### COR-COR

reign, 402—Polish, ib; XVIII. 158—of the Elbe, VII 403—French, ib— Spanish, 1b —of Odessa, 1b —American, 404-of Liverpool, XIII. 518-value of exports and imports of, VIII. 734, 736. Cornabu, Caledonian tribe, VI 74 Cornaceæ, nat order of plants, V 195. Cornage, VII, 405

CORNARISTS, VII 405. CORNARIUS (Joannes), VII 405 CORNARO (Luigi), VII 405

CORNBRASH, portion of the colltic forma-tion, VII 405, XV 207.

Corncockle Muir, reptilian footmarks

found at, XVII. 153

CORNEA of the eye, VII. 405; III. 43;

XIII 461; XVII. 678—in brutes, III

CORNEILLE (Pierre), VII. 405-Boileau's kindness to, IV, 814-his diamas, VIII. 149, 155-Helyetius and Suard on his character and writings, I. 135 and n 3 -contrasted with Shakspeare, VIII 158 - his intercourse with Racine, XVIII. 744.

(THOMAS) VII 405 (MICHAEL), painter, VII. 405. Cornel order of plants, V. 195 Cornelia, VII. 406, XIX. 318 Cornelian, VI. 67. See Carnelian. CORNET, VIL 406

— cavalry officer, VII. 406—commission, pay, and half-pay of, 202, 203
Cornice, III 487, 508, V 739—advantages of cornices to brick-walls, 736-remarks on, 743-plaster cornices in rooms, ib-Doric, III. 464, 476—Ionic, 465, 475-Corinthian, 467, 474—Caryatic, 467. CORNICULARIUS, VII 406.

Cornolli (Ant), his work on insects, IX.

Corns, in horses' feet, XXL 560 Constone, XV 200. CORNU, VII. 406-ammonis, 1b. See Ammonites.

CORNUCOPIA, VII 406 Cornufelle (Lago di), XVIII 831. Cornularınæ, polypes, XXL 1004. Cornulite, fossil, XVII 101

Connus, genus of plants, VII 406: V

CORNWALL, VII 406-Dr Borlase's works on, V 45-tin trade with the Phœni-cians 376-Carew's survey of, VI 236 -pilchard fisheries of, IX. 643 nish engines, I. 869; bollers, XX. 602
—porcelam clay of, V. 343—population
and value of property, VIII. 754—copper ores, VII 352, 350; XVII. 621— Devoman rocks of, XV 199; carboni ferous, 201, 204-lodes in, 219, 220depth of mines, 223—system of min-ing labour, 229—silver mines in, 234 tin mines of, 240, 241; VIII. 726; XVII. 621-assenic from, XV. 246rocking-stones in, VIII. 187.

CORNWALLIS (Charles, Lord), VIL 408his surrender to the Americans, V. 496, 499; XXI. 753—his war against Tippoo Sahib, V 541; XI 497—his permanent zemindary settlement in Bengal, IV. 650; XL 517—his government in India, 497, 506, 520, 521-his government in Ireland, XII. 499-his Indian land-tax, XXI. 44.

Cornwallite, mineral, XV. 103. CORO, in Venezuela, VII. 410; XXI. 537 COROLLA of plants, VII. 410; V 117, 123. COROLLARY, VII 410, X. 508—as to common terms, XIII. 570.

COROLLET, or Corollule, VII. 410 Corollifloræ, sub-class of plants, V 179, 198. COROMANDEL, VIL 410; IV. 652. CORON, or Koron, seaport of Messenia, VII. 410.

CORONA, in optics, VII. 410; VI. 645, 651; XIV. 681. See Halo.

- m architecture, III. 508. - in botany, VII. 412

australis and borealis, two constellations, VII. 412 - m Roman antiquity, VII. 412, 528; COR—COR

CORONACH, VII 412. CORONATION, VII. 412—oath, ib—stone of Scotland, XIX. 750 Coronea, battle of, XXL 177. Coronella, genus of serpents, XIX. 55 CORONELLI (Vincenzio), geographer, VII

CORONER, VII. 412 CORONET, VII. 413, XI. 335. Coronis, genus of insects, IX. 209 Coronula, fossil barnacles, XVII 101. CORPORAL, VII. 413-lance-corporal, 1b. - of a ship of war, VII, 413. CORPORALE, VIL 413

CORPORATION, VIL 413-civic, VL 736. Act, attempts in 1787 and 1790 to get it repealed, V 522, 536—repeal of,

charitable, in the reign of George II., V. 457

medical corporations, XIV 465 municipal, XV. 680—of London, XIII. 677.

CORPOREITY, VII 414. CORPULENCE, VII. 414

CORPUS CHRISTI, festival in the Romish Church, VII. 415. - Colleges-at Oxford, XXI. 459:

Cambridge, 465 Corpus callosum, XVII 588 CORPUSCIE, in physics, VII. 415. CORPUSCULAR PHILOSOPHY, VII. 415; IX.

- mechanism, XX. 750—laws of corpuscular achon, 763. Coria Linn, XIII 174; XIX. 791 CORRADI (Domenico), VIL 415; XVII

CORRADINI DI SEZZA (P. Marcellino), VII. 415

Corradino, sculptor, XIX. 864. CORRADO (Sebastian), VII 415. CORRECTION, in printing, VII. 415; XVIII 542. — (носке ог), VIL 416.

CORREGIDOR, VII. 416 CORREGIO, town of Italy, VII. 416. - VII 416 See Allegri. CORRELATIVE, VII 416 CORREZE, in France, VII 416; X 277 CORRIB (Lough), VII 416, X 389, XII

CORRIDOR, VII 416. Corrientes, town and province of La Plata, XVII. 779.

Cape, XVII. 777. CORROSION, VIL 416.

Corrosive sublimate, VI. 498-as a preventive of dry rot, VIII. 212—poisoning with, XIV. 433—as a preservative of timber, XX. 167.

CORRUISK, or Corriskin, lake in Skye, VII 416; XX. 317.

CORRUPTION OF blood, in law, VII. 416; Corruptions of Christianity, L 505

Corsair, pirate, VII. 416; IV. 431; V. 709—Algerine, II 570 et seq. CORSELET, or Corslet, VII 417. CORSEUL, town of Flance, VII 417. Corsellis (Frederic), early printer, XVIII.

534, 535. CORSHAM, town in Wilts, VII 417. CORSICA, VII. 417-Boswell's visit to, V. 63-reduced by the Romans, VL 288, and by the French, X. 37-height of mountains in, XVII. 642 - population of, X. 277 — language, XIII. 213 — Seneca's banishment to, XX. 46-Neuhoff, Baron von, his proceedings in, XVI. 154-weights and measures of, XXI. 810 - map of, X. Plate. See Paoli.

Corsini library, at Rome, XIII. 412. CORSNED, or Morsel of Execration, VII. 418; XVI 702.

CORSTORPHINE, near Edinburgh, VII. 418
CORT (Cornelius), VII 418
(Mr), his inventions in iron manu-

facture, XII 589, 574. Cortaillod, wines of, XXI. 886.

### COR-COS

CORTE, IN Corsica, VII 418, 417. Cortereal (Gaspar), voyages of, VL 158; X. 471 See Cortoreale.

CORTES OF SPAIN, VII 418; XX. 467, 492 -new constitution of the, 473, 475, 480 -of Portugal, XVIII 395

— (HERNAN), conqueror of Mexico, VIL 418, II. 699—his proceedings in Mexico, XIV. 703. 704, 705—city of Mexico taken by, 706 - (Martin), his treatise on naviga-

tion, XVL 3. CORTESE (Jacopo), VII 420; V 39. Corticus, genus of insects, IX 130 CORTLAND, in New York, VII. 420

CORTOMARCK, in Belgium, VII. 420. CORTONA, VII 420 — painter, XVII. 69
Cortoreale (Gasparo), navigator, XVIII.
164; VI 158. See Corte eal.

CORUNCANTUS (Tiberius), VII 420 CORUNDUM, mineral, VII. 420; XV. 87; XVII. 623

CORUNNA, VII. 421—Sir John Moore's retreat to, V. 604, XV 529, XXI. 706 battle of, V. 604, XV 529-tower of, XIII 464, X. 372.

Corus, Omer, or Homer, Jewish measure, VII. 421.

CORUSCATION, VIL 421 Corvée system, in France, X. 46, 245, 273, XXI 43—its abolition, 366. Corvette, sloop of war, VII. 421 Corvina, genus of fishes, XII 284, 285. CORVO, Island, VIL 421; IV 336 CORVORANT, VIL 421. See Cormorant.

Corvus, a constellation, VII 421. - ancient military engines, VII. 421 genus of birds, VII. 421; XVL 763. See Crow

- (M. VALERIUS), VII. 421 CORWEN, town in Wales, VII 422. Coryat on the introduction of table-forks, IX. 785. CORYBANTES, VII 422, 591.

CORYBANTICA, ancient festival, VII 422. CORYCOMACHIA, VII. 422. Corydalıs, genus of insects, IX. 179. CORYGAUM, in Hindustan, VII 422 Corylaceæ, nat. order of plants, V. 208. Corymb, in botany, V. 114. Corymbiferæ, sub-order of plants, V 197 Corymbium, VII. 422.

Corynidæ, polypes, XXI 1006. Coryphena, genus of fishes, XII 295, 298. CORYPHEUS, VII. 422; VIII. 134\* Coryphodon, genus of fossil mammals, XVII 162

Corystes, genus of crustacea, VII. 541. Corythaux, genus of buds, XVI. 783. Corythoichthys, genus of fishes, XII. 315. Corythus, genus of birds, XVI. 762 CORYVRECKAN, whirlpool of, VII. 422.

CORYZA, VII 422; VI 332 Cos, island, VII 422—coins of, XVI 377—silkworm of, XX 286. COSCINOMANCY, VII. 422. COSECANT, in geometry, VII. 422. XXI.

Cosenza, a city of Naples, VII. 422. Cosfeld, VII. 423. See Kosfeld.

COSPEED, VII. 423. See Rosield.
COSHERING, VII. 423
COSINE, VII. 423, XXI. 338—law of cosines, I. 902. Coslin, town in Prussia, VII. 423, XIII

132 Cosmacanthus, genus of fossil fishes, XVII.

Cosmas, bishop, VII 423

– navigator, VII. 423 – saint and martyr, VII. 423. Cosme (Frère Jean de St), XX. 819 and n. 1.

COSMETIC, VII. 423
COSMICAL, VII 423—notions of the Buddhists, X. 724.

Cosmogony, VII. 423—fabulous, XV. 760. Cosmographical Academies, II. 62. COSMOGRAPHY, VII. 423.

COSMOLABE, mathematical instrument, VII.

Cosmological argument for the existence of God, XXI 186.

T

#### COS-COT

Cosmology, VII 423; XIV. 605—of the ancients, IV 448; IL 167—the real in, XIV 615.

COSMOPOLITE, VII 423 Cosne, French town, VII 423. Cosrhoes. See Chosioes Cossacks, VII. 423; VIII. 100; XIX. 474 et seq, 549-Cossack horses, XI 635—country of, XIX. 521—Zaporagam Cossacks, XXI. 370—Ural, 495—their value as light troops, 709. Cosse de Geniste, order of knighthood

VIL 424. Cosseir, trade of, XVIII 819.

Cossim (Meei), XI 486, 487. Cossimbazar, in Hindustan, VII 424; X. 400

Cossipore, in Hindustan, VII 424. Cossonus, genus of insects, IX. 141. Cossus, genus of insects, IX. 211. Cossyan Hills, in Hindustan, VII 424, IV 651, X. 407.

Cossyphenes, trabe of insects, IX 131. Cossyphus, genus of insects, IX, 131. Costa (Achille), his works on insects, IX.

(O. G.), his entomological works, IX. 16.

- RICA, republic of, VIL 424; XI 77. Costan, VII 425. Costambone, in Anatolia, XIII 54.

Costanzo (Angelo di), VIL 425. COSTARD (George), VIL 425. Coste (Mons.), on the nests of the stickle-back, XII 281.

Coster (Lawrence), his claim to the invention of printing, IV. 706, 707. See Koster.

Costiveness in cattle, XXI 565 Cosway (Richard), VII 425. COTA (Rodriguez), Spanish poet, VII. 425. COTANGENT, VII. 425; XXI. 338. COTE D'OR, in France, VII. 425—wines of the adjoining districts, XXI 954 COTE-ST-ANDRE (La), town of France, VII.

426 COTELERIUS (John Baptist), VII. 426 COTERELLUS, VIL 426. COTERIE, VII 426

Corks (Roger), VII 426, IX. 675; XVI. 6-his Harmonia Mensularum, I. 647-Newton's remark at his death, 903-his mathematical discoveries, 692, 714—his life and character, 714, n. 2—his discovery of a certain property of a circle, called the Cotesian theorem, II, 561his correspondence with Newton regarding a new edition of the Principia, XVI. 208.

Côres-Du-Nord, in France, VII. 426. COTESWOLD, VII. 426.

hills, X. 679—sheep, ib.; II. 346—

soil of, XV. 217.

COTHEN, German town, VII. 426; XIII

Cothi, river, VI. 52. Cotho, taken by the Romans, VI. 302. Cothual (Yúsuf), II. 605

COTHURNUS, VII. 426, VI. 24; VIII. 135. COTIGNAC, town of France, VIL 426. COTILLON, VIL 426 Cotingas, birds, XVI. 750.

COTIOTE, in Hindustan, VII 427. Cotoneaster, genus of trees, XVII. 763. COTOPAXI, volcanic mountain, VII. 427—cone of, XXI. 604—height of, VIII. 386; II 669: XVII. 645—fishes ejected

bv. XII. 260 COTRONE, city of Italy, VII. 427. See Crotona.

Cotswold, TL 346. See Coteswold. Corr. or Cot. VII. 427.

COTTA (C. Aurelius), Roman general, VII. 427—defeated by Mithridates, XV. 284.

—— (Bernhard), on rocks, XV. 129, 133

- German journalist, XVI. 200. COTTABUS, a game, VII 427; IX. 495. COTTAGE SYSTEM, VII. 427. Cottages for farm labourers, II. 268 COTTAPATAM, town in Hindustan, VII.

Cottar system, in Inverness-shire, XIL

#### COT-COT

COTTBUS, Prussian town, VII 435 See Kottbus

Cotterel's blast-furnace, XVIII. 80, 81. Cotterill's lock, XIII. 585 Cottian Alps, II. 623; XVII 596-

home of the Valdenses, XXI 505 Cottin (Madame), character of her novels, XIX. 289

COTTIWAR, town in India, VII, 435. See Kattywar

Cottoider, family of fossil fishes, XII 344 COTTON (Charles), VII. 460—on angling, III 149, n, 163; XXI 696.

- (General), V. 784. (Sir Robert Bruce), VII 460, XIII 389

- VII 435-bleaching of, IV 762loss of weight by bleaching, 767—dyes worse than silk and wool, VIII. 274, 278-structure of, 277-dyeing of, ibmethod of dyeing it red, 292, yellow, 299, blue, 303, black, 306; green, 310; violet, 312; orange, 313; mixtures of black, &c. 314-imports of, into the United Kingdom, XIV 255, 287; and consumption of, ib. - exports, 287-dependence of Britain on the United States for supplies of, 291-its culture in New South Wales, IV. 280—Asia,
 iii 738—Bengal, IV. 649—Brazil, V.
 294—Ceylon, VI. 399—Egypt, VIII. 428, 431, 516-Greece, XI. 16-Guana, 82 -Georgia, X. 566-India, XI 453-Louisiana, XIII 700-Mexico, XIV 717 -Mississippi state, XV. 278-Asiatic Russia, XIX. 551—the Two Sicilies, XX. 249—United States, XXI 425—sılk-cotton tree, V. 184—sılk-cotton order of plants, 184-paper made from, XVII. 249

- factories See Factory. goods, value of, exported annually,
VII. 456, VIII 736—quantity imported into Canada, VI. 151—cause of fall in price of, XVIII 241—increased demand for, with the fall of price, XXI 69

MANUFACTURE, VII. 437, XIV. 285 -its establishment and progress in Scotland, X 650-Hargreave's and Arkwright's improvements in, III 609; V. 755—Belgum, IV. 625—Holland, XI. 583—Paisley, XVII 89—Preston, XVIII. -England, VIII 729-France, 252—Germany, 590 — Glasgow, 650—Georgia, 565—Ghent, 601—Lancashire, XIII 178-Japan, XII. 693-Java, 706 —Iteland, 520—Lombardy, XIII. 657— Mexico, XIV 717—imports into Liverpool, XIII. 518-progressive inventions of machinery for, XIV. 251-impulse given to, by the repeal of the cornlaws, 255—Manchester, 252 et seg effect of, on the health of operatives, 253, n-in Pennsylvania, XVII 396-Philadelphia, 510—printing of cotton, XVIII 520—in Prussia, 668—Rhode Island, XIX. 146-Russia, 542-Scotland, 805 — Switzerland, XX 890 — United States, XXI 426, 427. See Calender, Spinning, Weaving.

— plants, VII. 485; V. 184. Cotton-seed cake, as manure, II. 405 analysis of, ib

Cotton-spinners, diseases of, XIV. 443 Cotton-velvet, X. 252.

Cotton-yarn, comparative cost of English and Indian, VII. 439—prices of, from 1786 to 1807, 446-quantity spun, exported, and worked up at home from 1818 to 1858, 458—markets to which exported, ib.—quantity spun in this country in 1832, 454—value of exports of, 736—in 1835, XIV. 258.

Cottonian MSS, XIII. 391. Cottus, genus of fishes, XII, 280, 282fossil, 344.

Cotugno on the ear, III. 47. Cotula, or Cotyla, VII. 460. Cotunnite, or Cotunnia, XV. 105. Coturnix, genus of birds, XVI. 791. COTYLEDON, VII. 460; V. 76, 141.

#### COT-COU

Cotyledoneæ, order of plants, V. 180 Cotylis, genus of fishes, XII 307. Cotyloid cavity, III. 12. COTYS, VII 460

COTYTTO, VII. 460 Couce, in painting, VII 460-in surgery, 1b ; VI 332

— (Richard Q), on the metamor-phosis of crustacea, VII 544. COUCHANT, in heraldry, VII. 460, XI 332. COUCHE, VII 460

Coucy (Enguerand de), XX. 884. Couerbe on the fatty principles of the bram, II 819

Cough, chronic, in the domestic animals, XXI 573

COULAN, VIL 460 See Quilon

COULOMB (Charles Augustin), VII 460; I. 742, n 2, 873—discovered the true law of magnetic attraction and repulsion, 742, 989-further discoveries in magnetism, 743, XIV 6, 23, 28, 37, 43 et seq —on electricity, VIII 531; I. 988 -on the distribution of electricity, 551-53, I. 989, dissipation of, VIII 550his "proof plane," I 988—on hydrodynamics, 726; XII. 73, 159—his balance of torsion, I 726, 873, 988, IV. 386, VIII 549-on friction and passive strength, I 873-on the friction of fluids, 887his artificial magnets, XIV. 70-experiments on the modes of making artificial magnets, 77—compared with Robison, I 873, 874—on compass-needles, XIV.

COULOMMIERS, town of France, VII 465 Council, VII 465—of war, 1b—in Church history, 1b; I. 526, XIX. 750—of boloughs, VIII 721.

cabinet, VI 46.
Counsel, VII 465 See Advocate Counsellor, VII. 465-Privy, ib , XVIII.

COUNT, VIL 463 COUNTE, VII. 465

COUNTER, VII 466—of a horse—in heraldry— Counter-changed—Flory—Ermine—Paled—Passant—Pointed—Quartered—Salient—Guand—March—Mine—

tered—Sanent—trans d—march—Mine— Proof—Sign—ib, 467. Counter-company, in heraldry, XI 326. Counterscarp, VII 467, IX. 818 Counterpoint, in music, VII 466—double, XV. 734.

Counters, reckoning by, III 582. Counting-machines, XIV. 414. Country, viii 467.
Country, statistical account of a, what it

should include, XX 550

COUNTY, VII. 467—representation of, ib—divisions of, VIII 719—cities which are counties of themselves, 721-police of English counties, XVIII. 198, 201; of Scotch counties, 203, 204.

- court, VIII 786 - rate, VII. 467. Coup de soleil, XIV 431

Couple, in mechanics, XIV. 405—coupling of parallel axes, 397, 399—double, Hooke's coupling, 400.

Couplet (Mons), on centres, VI. 374—his hydraulic experiments, XII. 133; XIX. 186, 198, 199

Courage not identical with prudence, I. 395-observations on, 396. COURANT, VII. 467. See Current.

- piece of music, VIL 467. COURAYER (Pierre François) VII. 467. COURLER, VII 467—ancient, ib.; III 140. COURLAND, VII. 467. See Kourland

- Duchess of, empress of Russia, XTX, 481

XIX. 481

COURT, VII 467—of Arches, 468—Baron, ib; VIII. 786—plaster, VII. 468—hundred court, VIII. 786—county court, 786—of equity, IX. 317—of justice in England, VIII. 785—Court of the Household, XL 774; of Marshalsea, or Green Cloth, 1b. See France, Scotland, Ireland, &c.

COURT-MARTIAL, VII. 468; XV. 5; XVI.

Courtezans, the London theatres infested by, VIII. 169.

#### COU-COW

COURTHEZON, town of France, VII. 468. COURTRAI, in Belgium, VII. 468 COUSIN, VII. 468—cousins-german, X. 570. (David), his abattoir in Edinbuigh,

(M. V), his edition of Abelaid's works, IL 27

 (M), on the moral sense, XIV. 581 —on the knowledge of being, 611—on the scepticism of Pascal, XVII. 329, 330

COUTANCES, town of France, VII. 468. COUTH-UTLAUGH, VII 468 Contanto (Vasco Fernandes), V 280
———— (Francisco Pereita), V 280
Couvin, town of Belgium, VII 468.
Concerante, mineral, XV 71. Covadonga, IV 156 Cove, in Ireland, VII 468 See Queens-

town or Coving, in architecture, III. 508. Covelline, mineral, XV. 118

COVELONG, in Hindustan, VII. 468 COVENANT, in theology, VII. 469; I. 480 and n 2

- in ecclesiastical history, VII 469: V 395

· (Solemn League and), VII 469, V 404

COVENANTERS, VII. 469, V 395, 428 et seq. -persecution of, at Glasgow, X 647. Covent Garden market, XIII 664—theatre, 676; XXI 173, 176.
COVENTRY, VII 469—canal, XXI 17—

ribbon factories at, 738
——— (Sir John), VI 626

(Mr), his stage micrometer, XIV 760

COVERDALE (Miles), VII 469-his Bible, IV 702.

Covered-way, in fortification, IX. 819. COVERIPAUE, in India, VII. 470

COVERT, in law, VII 470—way, in forti-fication, ib; IX. 819 COVERTURE, in law, VII 470. Covey of partindges, XX. 221. Covilham (Pedro da), X. 393.

COVIN. VII 470 Coving, in building, VII 470

Covington, in Kentucky, XIII. 70.
Covinus, VII 470
Cow, VII 470, II. 342; XIV. 214—yield of milk by, VII 622—its milk, XV 11 -food of, as affecting the milk, VII. 621—dairy breeds of, 1b — Alderney, XII. 730—Devonshile, VII. 764—Doi-

byshire, 755. See Dairy. Cow-parsnip, forage plant, IL 329. Cow-pen bird, XVI. 762

Cow-rox, VII 470; XIL 720 et seq.; XXI 500, 501. COW-TREE of South America, VII 470;

V 206. Cow-wheat, V. 202. of Demerara, V 199.
Cowan's Hospital, Starling, XX. 702.

COWARD, in heraldry, VII. 470 COWBRIDGE, town in Wales, VII 470 - (Mr), his report on the poor-laws,

XVIII 307, n. 2, 308, n. 2. Cowburn's cellular steam-boiler, XX. 616. Cowdee. See Kawrı pine.

Cower (Dr John), VII 470. Cowen (Messrs), their gas-retorts, X. 413. Cowes (West), in Isle of Wight, VIL 470; XXI. 862.

COWHAGE, or Cowitch, VII 470; V. 190. Cowie (James), on farm-buildings, II. 371. Cown or Coul, VII. 470.

COWLEY (Abraham), VII 470—remarks on his ode entitled Destiny, I 270 poetry of, XVIII. 122.

- (Walter and Richard), XXI. 815. Cowper (B. Harris), his translation of documents regarding the Council of

Nice, XVI 248, n.

(WILLIAM), VII 471—his opinion of Barclay's Argenis, IV. 441—his hymns, XII. 189—Hayley's Life of, XI 253—Pitt's neglect of, XVII. 735 poetry of, XVIII. 125.

(William), anatomist, II. 764—on the erectile tissue, 799.

### COW-CRA

Cowper's glands, III. 70. - printing-machine, XVIII. 559. Cowries, VIL 473, XV 384-tiger and money cowry, 1b -used as money, XIII. 142, XV 417-fossil, XVII. 110. See Cypræa. Cowry, bird, XVI 748.

Cowslip, V. 203 Cox (Richard), VII. 473. on brehon law, XIX. 750. Coxal bones, III. 12.

Coxe (William), VII 473—on Isola Bella, V 55—his notice of a remarkable bridge in Switzerland, VI. 384.

COTPEL (Noel), painter, VII 473. Coypou, rodent quadruped, XIV 180-its fur, X. 348. COZENING, VII 473.

Cozens, painter, XXI. 386, 387. CRAB, VII. 473, 541-as food, IX. 765.

Island, IV 660
soldier, VII. 542. Crab's eyes, VII. 539.

CRABBE (George), VII 473—his definition of genius, X. 450—his poetry, XVIII. 126.

Crabro, genus of insects, IX. 196. Crabronites, tribe of insects, IX. 196 Crabtree's combing machine, XXI 925. CRACOW, VIL 474, X. 212—hbrary of, XIII. 425—foundation of, XVIII. 137republic of, 157-incorporated with the empire of Austria, X. 222, 225; IV 306; XIX. 498—taken by Chailes XII., XX. 853—university of, XXI. 492

Cradles, in mezzotinto engraving, XIV. 733, 734.

in Lapland, XIII 240 CRADLING, in carpentry, VII 475. Cradock (Mr), on the defects of fir timber, XXI. 275

Chage, a geological formation, VII. 475 red crag, XV 214, coralline, ib. Craggie (Loch), trout of, III. 158 CRAGUS, mountain in Lycia, VII. 475.

CRAIG (John), VIL 477 · (John), his system of savings-bank management, XIX. 669.

(Sir James Gibson, Bart), VIL 476.

— (Mr), architect of New Town of Edinburgh, VIII. 394. — (Sir Thomas), VII. 477; V. 718— his illustrations of feudal law, IX. 524 -Tytler's Memoir of, XXI. 414.

Craig-Phadrick, vitrified fort of, IX. 791. Craigellachie bridge, XIL 582. Craigentumy meadows, irrigation of, IL

326; XII. 620. Craigie (David), his work on anatomy,

III. 73. Craigleith quarry, VIII 408; XX. 711transverse strength of its stone, 717; its resistance to crushing, 718.

Craik (Dr), physician to Washington, XXI. 762, 746.

(Dr G. L), on Spenser's Fairy

Queen, XX. 507. - (Mr), of Abigland, his agricultural

improvements, XIII. 99. CRAIL, in Fifeshire, VII 479 Crambus, genus of insects, IX 218 Cramer (Dr), on the geometric proportions

of bees' combs, IV. 578—on mortality at Geneva, XV. 622. - (J. B.), his opinion of Beethoven

as a pianoforte player, IV. 590 (Peter), his work on butterflies, IX. 6

- on Greek education, XV. 807. CRAMOND, village on the south side of the Firth of Forth, VII. 479, VIII 408. Cramp of the stomach, in domestic ani mals, XXI 565

CRAMPONEE, in heraldry, VII. 480. Crampton (J. James), articles of international copyright drawn up by, VII

Cran, a measure, IX. 635, n. 1. CRANBERRY, VII. 480, V 198-culture of, XI. 719—exported from Russia, XIX. 519.

- order of plants, V. 198.

#### CRA—CRA

CRANBORNE, town in Dorsetshire, VII 480 CRANBROOK, in Kent, VII. 480; XIII. 66. Cranchia, genus of mollusks, XV 400. CRANE, bird, VII 480; XVI 797

a machine for raising great weights, VII. 480; XIV 415 Crane's iron-works, XII 544. Cranesbill order of plants, V. 187 Cranganore, in India, VII 480 Crania, genus of mollusks, XV. 339-fossil,

Craniadæ, family of mollusks, XV. 339. Cranium, general description of, III. 27, 28, 29. See Skull.

CRANK, VII 480; XIV 398-Watt's application of, to the steam-engine, XX. 581description of, and analysis of its action 589, 590-combination of two at right angles, 591; analysis of their action, ib -effect of the connecting-rod on the crank's action, 1b

- in sea language, VII 480 for hard labour in prisons, XVIII. 573; XIII 278

CRANMER (Thomas,, archbishop of Canterbury, VII 480, VIII 700, 706, 710—his Bible, IV 702—his degradation, VII. 700.

Cranny, in glass-making, VII. 485 Crantara, VII. 485

CRANTOR, Greek philosopher, VII. 485. CRANYOR, Greek philosopher, VII. 485.
Cranworth (Lord), on the evils of copyhold tenure, VII. 355, n
CRAON, town of France, VII. 485
CRAONNE, French town, VII 485—battle of, ib; X. 167.
CRAPE, VII. 485—Norwich crape, XVI.

222.

CRASHAW (Richard), VIL 485. CRASIS, VII. 485-in grammar, ib. Craspedosoma, genus of mynapods, XV.

Crassitella, genus of mollusks, XV. 350-fossil, XVII 108

Crassulaceæ, nat order of plants, V 194 Crassus (M Licinius), the triumvir, VII 485; XIX 824—his expedition against the Parthians, XVII. 310, 435

(L. LICINIUS), Roman orator, VII. 485

Cratægus, genus of trees, XVII 763 CRATE, VII 485

CRATER, VII. 485, XXI. 604—of Ætna, II 190—of Tenger Mountain, in Java, XII. 702-elevation theory of craters, XV. 190-cone within, 191-craters of elevation, XVII. 590-encircling craters, XXI.

- constellation, VII. 485; IV. 80. Craterus, XIII 773. CRATES, Greek philosopher, VIL 485, XXI 970.

Crata, river, XX. 238. CRATINUS, comic poet, VII. 486 CRATIPPUS, philosopher, VII. 486. Cratistus, geometer, X. 499 Cratylus, III. 538

Crau, alluvial plain in France, V. 241. Crauford (John), on the original popula tion of the Indian Archipelago, III. 748 -his account of Ava, IV 321-his esti-mate of the population of Burmah, V. 780 - his embassy to Cochin China, VII 50; to Siam, XX. 234.

Cravant, centring for the bridge of, VI.

Craven, in Yorkshire, XXI 956, 957, 958. Craw-fish, VII 542.

Crawford (Adar), physician, VII 486— on heat, XL 278, 274; I 761, 927; IV. (Dr Stewart), VIL 486.

(John), VII 486 Crawford's Report on the Penitentianes United States, XVIII. 571, 572. Crawfurd of Drumsoy, his perversion of history exposed, XIII. 158.

Crawhall's rope-machine, XIX 412. Crawley (Sir Francis), XXI 689. Crawley-springs, near Edinburgh, III 387; VIII. 405.

Crax, genus of birds, XVI. 785. Cray, river in Kent, XIII. 65.

### CRA—CRE

CRAYER (Caspar de), painter, VII. 486. Cray-fish, VII. 542; IX. 765. Cray-ford, in Kent, VII 487. CRAYON, VII 487, XIII 510 Creadon, genus of birds, XVI. 753
Cream, VII 487; VI. 523, XV 10—
clouted-cream, VII 623. See Darry.
— of tartar, VII 487, its use in dyeing, VIII 278 See Argol.

CREASOTE, VII. 487; XIX. 621—a preservative of meat, IX. 767—used for preserving timber, V. 173; XX. 167; XXL 279.

CREAT, VIL 487.

CREATION, VIL 487-era of the, VI 668, XI 540-objections to the Mosaic account of, L 455; principle on which they are to be answered, ib -account of, probably committed to writing long before the time of Moses, 454-as described in Genesis, XXI. 195

CREBILION (Prosper Jolyot de), VII 487
—Voltaire's quarrel with, XXI 658.

(Claude), VII 487—character of his novels, XIX. 288.

CRECY, Crescy, or Cressy, town of France, VII. 487—battle of, VIII 683; VI 616, X 17-archers at the battle of, III 424.

CREDENTIALS, VIL 487 CREDIBILITY, VII. 487 — of the Scriptures, XIX 832.

CREDIT, VII. 487, XVIII 235-bad effects of long credit, VII. 198—Holland a country of short credit, 1b.—definition of, XV. 450 - Foncier, X. 263

- Mobilier, XV. 289; X. 263 CREDITON, in Devonshiie, VIL 490woven at, 764. CREDITOR, VII. 490.

Crednente, mineral, XV. 111.

CREDULITY, VII 490. CREECH (Thomas), VII 490 CREED, VII 490; I 502—Nicene, XI 34; XVI. 248-the apostles, I. 491, 493, III 305—Athanasian, IV. 158—creeds rejected by the Independents, XII 370 See Confession of Faith

(Thomas), printer, XVIIL 538. Creek, in geography, X. 483.

Falls, in New York, XVI. 214. Creeks, Indians, II 680 Creep, in coal-workings, VII 122

Creepers, birds, XVI. 768 CREETOWN, in Kirkcudbright, VII. 490. CREFELD, or Krefeld, in Prussia, VII. 490 Creighton (William), on the law of the relation between the pressure and temperature of steam, XX. 565.

CRELLIUS (John), VII. 490. CREMA, town in Lombardy, VII 490. Cremastocheilus, genus of insects, IX. 127. CREMATION, VII. 491. See Burning of the

CREMERA, river in Etruria, VII 491. CREMNITZ, town of Hungary, VII. 491. See Kiemnitz.

Cremocarp, in botany, V. 137. CREMONA, in Lombardy, VII. 491-school of painting, XVII. 72, 73-Virgil studies there, XXI 593—its violins, 592. CRENATE, VII. 491; V 89.

Crenatula, genus of mollusks, XV. 348 Crenella, genus of mollusks, XV. 348. CRENELLATED, VII. 491 CRENELLE, or imbattled, in heraldry, VII.

Crenidens, genus of fishes, XII. 287.

Crenilabrus, genus of fishes, XII. 267. Crennels, VI. 327. CRENOPHYLAX, VII. 491. CREODIBA, VII. 491.

CREOLE, VII. 491—of Bohvia, IV 831— Cuba, VII. 568—Mexico, XIV. 718. CREON, VII. 491.

Crepance, VII. 491. CREPIDA, VII. 491. Crepidula, genus of mollusks, XV. 381.

CREPUNDIA, VII. 492 Crepuscularia, family of insects, IX. 209. CREPUSCULUM, VII. 492.

Cres, VII. 493.

### CRE—CRI

CRESCENT, VII. 492—in heraldry, ib , XL 326—three orders of knighthood, VII.

Chescentiaceæ, nat order of plants, V. 200. CRESCENTINO, town of Predmont, VII 493. CRESCIMBENI (Giovanni Mario de), VIL 492.

CRESSET, VII. 492. CRESSY, French town, VII. 492. See

CREST, in armoury, VII. 492.

— m heraldry, VII. 492; XI 337.
CRETACEOUS, VII. 493

- period, in geology, XV 209-rocks, origin of, XVII 619-shells of, XV. 403 -fishes, XVII, 640

Cretans, their war with the Egyptians, VIII 459

CRETE, VII 493—castes in, VI 315 coins of, XVI 372, 373—Dactyli Idan, VII 615—insuraction of 1823, XL 27. See Candia.

CRETINS, VII. 496 -occasionally found in Britain, 687—cretinism dependent on climate, XIV 443—where it prevails, 539-in the department of Garonne, X 405-in the Basses Pyrenecs, XVIII. 701

CREUSA, VIL. 497 CREUSE, in France, VII 497 Creutz (Count), Swedish poet, XIX. 698 Crentzer (Christian), his works on insects, IX. 8

CREUX, in sculpture, VII. 497. Creuzer, on ancient mysteries, XV. 754. Cievasses, in the ice of glaciers, X. 635. CREVIER (Jean Baptiste Louis), VII 497. Crew of a ship of war, XVI. 105—health

CREWE, town of Cheshire, VII. 497. CREWKERNE, in Somerset, VII 497. Crex, genus of birds, XVI 807 Crib-biting, a disease of horses, XXI 565. Cribersponga, fossil sponges, XVII 93.

Cricetus, genus of mammalia, XIV. 182.

Crichton (George), VII. 499, n.

(JAMES), VII. 497—Tytler's Life

of, XXL 413.

- Royal Institution for lunatics, VIII.

CRICKET, insect, VII 501, IX. 157 game of, VII 501; XL 170—laws of, VII 501.

CRICKHOWEL, in South Wales, VII. 503. CRICKLADE, in Wiltshire, VII. 503. Cricodus, genus of fossil fishes, XIL 337. CRICOID, VII 503—cartilage, III 50 CRIEFF, in Perthshire, VII. 503—mineral

water of, XVIL 457. Crime, causes of, XIII 275-natural obstacles to, 276-principle of proportioning penalties to, ib -statistics of, 278; XX. 552-benefit of clergy, VI. 764penal colonies, VII. 139-in Belgium, IV. 616—state of, in England and Wales, VIII. 750—France, X. 282— Glasgow, 654 - Manchester, XIV. 258 Giasgow, 654—Manchester, AIV. 226
—Ireland, XII. 580—India, XI 521—
Lanarkshre, XIII. 176—London, 666
—Spain, XX 492—Suffolk, 791—New
York, XVI. 221—Scotland, XIX 803 register of crimes, XVIII. 208—in Sweden, 866 See Criminal Law, Po-lice, Prisons, Penitentiaries, &c.

CRIMEA, VII 503—declared independent in 1789, VI. 336—ceded to Russia, ib.; XIX 471—coasts of the, IV. 743—Crimean army stove, XIII. 172—landing of French and British troops in, XIX. 503; XXI. 375—military operations in 1854, 1855, XIX. 503; XXI. 375—eva-cuation of, XIX. 513—productions of, 520-effect of the war in, on the teaduties, XXL 90-wines of, 886-map of VII. Plate.

CRIMES AND PUNISHMENTS, VII. 506— Beccaria on, IV. 556—conditions under which punishments must be employed, XIII. 276-primary and secondary qualities of punishments, 277. See Crime.

#### CRI-CRO

Criminal law of England, VIII 784-attempts to improve the, by Sir James Mackintosh and others, V 633, 638--acts passed in 1823, 638-Sir R Peel's reformation of, XVII 363.

Crimson, mode of dyeing wool, VIII 290 -cotton, 295

Cunan Canal, III 527; XVI. 55; XIX. 12, 807

Crinoidea, fossil echinoderms, XVII 98. Crinoideze, XXI, 984, 994, 995 Criocerides, tribe of insects, IX. 147. Criocens, genus of insects, IX. 147 Crippling, in carpentry, XX. 752, 759 Crispe (Sii Nicholas), XXI 689 Crispe (Sil Kicholas), AA1 665 Crispen and Crispianus, VII 506. Crissa, or Crisa, VII 506, II 728 Cristiceps, genus of fishes, XII 309. Critchley's heat-regulator, XI. 723.

CRITIAS, VII 506. IV 209; XX. 383 CRITICISM, VII 506, XVII 526-Biblical VII 506-first taught by Socrates, XX. 402

CRITO, Athenian philosopher, VII 506friendship between him and Socrates, XX. 372, 379, 393, 394. CRITOLAUS, VII 506.

Crius, genus of fishes, XII. 302 CROATIA, VII 506-wines of, XXI 886 Croatian language, IX. 392. Croats, in Hungary, XII 11. Crocisa, genus of insects, IX 200.

CROCKET, VII. 506; III. 508 CROCODILE, VII 506, XVII. 634; XIX 22, 23—bones of, III. 86, 87—teeth of XVI. 437, then chemical composition, 418-its power of resisting starvation, III. 180 - lethargy or summer sleep of, 181 - in Madagascar, XIII 792white crocodiles of the Nile, XVI. 268, 270—in Egypt, VIII. 432, 433—in hiero-glyphics, XI 392—crocodile-headed god, ib., n. 6-Syllogismus crocodilinus,

XIII 634, n Crocodilia, fossil reptiles, XVII 152-gcological distribution of, 154.

Crocodilopolis, VIII. 503. Crocoisite, mineral, XV. 106. Crocus, genus of plants, VII. 506; V. 212 Cresus, last king of Lydia, VII. 507;

XIII. 747. Choff (William), VII 508 Crofter system, in Inverness-shire, XIL

CROISERS, religious order, VII. 508

CROISES, or Croizes, pilgrims to the Holy Land, VII. 508. Croix (St), river, XXI 893.

(Ste), on ancient mysterics, XV. 754.

Croker (J. D), on the salmon fishing of the river Blackwater, in Ireland, IX.

(Mr), on Pope's quarrel with Lord Harvey, X1 361

Croll's gas-retorts, X 413-his method of purifying gas, 418—gas-meter. 423. Cromarty (county), VII. 508. See Ross

and Cromarty. town, VII. 508 - fisheries, XIX.

427; IX. 640, 642

- Firth, XIX. 425, 794-currents of, XVI. 61 - amount of river and tidal water in, 82.

CROMER, town in Norfolk, VII. 508. - (Archbishop), XII 475.

CROMFORD, town in Derbyshire, VII 508 -canal, 754.

CROMLECH, or Clomleh, VII. 508; III 433; XX. 710—in Antrim, III. 284—in Kent, XIII. 68 - in Pembrokeshire. XVII. 374.

Crompton (Samuel), his invention of the mule jenny, VII 444; XX. 510 Cromwell (Henry), the friend of Pope, XVIII. 327, and n.

—— (Henry), his government of Ire-land, XII. 486.

(OLIVER), VIL 509; V. 394, 404 et seg.—his military operations in Ireland, 413; VIII. 218; XII. 484—his policy towards Scotland, V. 415—

### CRO-CRO

military operations in Scotland, 414resolves to seize the sovereign power, 416-turns out the Parliament, ib -is declared Protector, 417-the crown offered to him, and refused, ib-his death, 418-and character, ib -indignities to his remains, 421—alleged weight of his biain, III, 52—at Glasgow, X. 647-his patronage of Dr Owen, XVII. 31-his policy towards Jamaica, XII. 673; Holland, XI 576—his navy, XVI 92, 93—newspapers under, 182-post-office under, XVIII.

CROMWELL (Richard), VII 516-succeeds his father as Protector, V 419
——— (THOMAS), earl of Essex, VII. 516,

VIII 702, 704

Cronia, ancient festival, VII 516 CRONSTADT, VII 517; XVII. 487; XIX 535-chart of, VII. Plate

town in Transylvania, VII. 517 Cronstedtite, mineral, XV. 79

Chop of birds, III. 109; XVI 734-of insects, IX. 51.

Crops, IL 306-preparation of land for, 287 - rotation or succession of, 292, 416; V 98-grain, IL 306-root, 315herbage and forage, 322—quantity of mineral matters and nitiogen taken from the land by different grain crops, 417 - principal, cultivated in England and Wales, VIII. 723; in France, X 246-extent of land in England and Wales under crop in 1852-53, VII 396, ın Ireland, ın 1854, 1855, XII 515, 516 -acreage and produce of the principal crops in Scotland, XIX. 796, 797.

CROSIER, or Crozier, VII. 518

CROSLET, VII 518, XI 329 CROSS, VII 518—history of the supposed true cross, 519-trampling on, in Japan, XII. 697—St Andrew's, III 184
—— exaltation of the, VII 520-

bearer - pectoral - order of the - St George's, ib.

in heraldry, VII. 520; XI. 328. invention of the, VII. 520-flery cross of the Scottish Highlanders, 485. ——— (St), hospital, XXI 880. Cross-bills, birds, XVI. 761.

CROSS-BOW, VII. 520; V. 251; III 424. Cross-moline, in heraldry, XI, 326. Cross-stone, mineral, XV 77.

CROSS-TREES of a ship, VII 520. Crosse (Andrew), on the electricity of the atmosphere, VIII 578-his experiments in electro-chemistry, XXL 632 - his

water battery, 619. Crosses of Queen Eleanor, III 481. Crossing, of species, III. 174-effect of, in horses, XI. 635; in hounds, 766—cross breeds of cattle, IL 341; of sheep, 347;

of plants, XL 702 Crossings, on railways, XVIII. 776. Crosskill's clod-crusher, II. 273

Crossochellos, genus of fishes, XII. 257. Crossorhinus, genus of fishes, XII 323 Crossostoma, fossil mollusks, XVII. 109, 110

Crotalocrinus, fossil echinoderms, XVII 98.

CROTALUM, VII. 520 CROTALUS, rattlesnakes, VII. 520; XIX. 68—skull, teeth, and poison-fang of, XVI 432 See Rattlesnake.

CROTCH (William), doctor of music, VIL 520—on the music and musical instru-ments of Java, XII. 706, 707. CROTCHET, in music, VII 521—in print-

ing, 1b.

Croton aqueduct, III 337; XVI 231 or Crotona, city of Magna Græcia, VII. 521—academy of antiquities at, II. 69—coins of, XVI. 363—Pythagoras' residence at, XVIII. 710—war of the

Sybarites with, XX. 891.

— ou, VII. 521; V. 206; XVI. 495.

Crotophaga, genus of birds, XVI. 779.

Croup, VII. 521.

CROUSAZ (Jean Pierre de), VII. 522fluence of Locke's doctrines on, I. 106 -his principles mistaken by Pope and

#### CRO—CRY

Warburton, ib, n 4-Gibbon's opinion of, ib -on beauty, IV. 538-on Pope's Essay on Man, XXI. 728.

CROW, VIL 522-bald, XVI 749-744-hooded, 1b-red-legged, 771. - in mechanics, VII 522-crow

bill-crow's feet, ib , IX 809 See Caltrop.

Crowberry order of plants, V. 205. Crowgarth, iron mine at, VII 577. CROWLAND, VII 522—Abbey, XIII 492 CROWN, VII 522—in heraldry, XI 335different kinds of Roman coronæ, VII.

clerical tonsure, VII 523 glass, manufacture of, X. 661. in astronomy, VII 523. in geometry, VII 523.

——— office, VII 523 See Coroner Croydon, in Surrey, VII 523, XX 837— canal, ib—roof of the railway, XIX.

Crozier (Captain), X. 298, 474; XVIII 171

CROZOPHORA, genus of plants, VII 523 CRUCIBLE, VII. 523-in brass-making, V.

 furnaces, X. 357. CRUCIFERE, nat order of plants, VII 523, V. 182—region of, 227; XVII 627.

CRUCIFIX, VII 523.

CRUCIFIXION, VII. 523, 518-in Japan, XII. 693

CRUDEN (Alexander), VII. 523-his Concordance, 228.

Cruelty, as a ground of divorce, VIII 71 - to animals, III 177, 178, XIL 33 Crueze (Mr), on ship-building, XX 182article on, in the previous edition of this work written by, ib.; 185.

Cruickshanks, on the voltaic pile, I. 966— his galvanic trough, XXI 611—on the chemical effects of voltaic electricity, 628.

Cruikshank, on the lymphatic vessels, II 766, 803 et seg—on lymphatic glands, 805, 806—on the skin, 834

Cruives, for catching salmon, IX. 617. Crum (Walter), his mode of using bleaching powder, IV 763—on indigo, VIII

Crumlin viaduct, XII 597.

Crusaders, Gothic architecture probably introduced by them from the East, III 446—their armies, 635—their operations in Egypt, VIII. 479 et seq—their wars with Saladin, 481 et seq; XVII 196—their captule of Jerusalem, XII 734; XVII. 196-their cruelties to the Jows, XII. 778—Sidon captured by, XX. 270 in Syria, 911-were the first Europeans who saw negroes, 320-probably introduced sugar into northern Europe, 791

CRUSADES, VII. 524, 317, III. 635; VI. 605; VIII 480 et seq, 675; XII. 784; XVII. 196, 197-heentious morals introduced by, VI 610—preached by St Bernard, IV. 669—their influence on geography, X. 469—promoted heraldry, XI. 321—their effects in Italy, XII 645 orders of knighthood originated with. XIII. 111-Peter the Hermit's advocacy of, XVIL 483

CRUSCA, Academia della, VII 536; II. 70; XII. 661; IX 666

Crushing, power of bodies to resist, XX. 718, 759

CRUSTACEA, VII. 537—distinguished from allied classes, III. 367—their use for food, IX. 765—in the Greenland seas, XI 43—fossil, XVII. 100, 101, 640.

CRUSTUMERIUM, VII 544. CRUTH, a Welsh musical instrument, VII 544.

Cruveilhier (T.), his descriptive anatomy, II. 769-on the Pacinian corpuscula, 817.

CRUZADO, Portuguese gold coin, VII. 544: XV 442, 444. Crwth. See Cruth.

CRYOLITE, mineral, VII. 544; XV 98. CRYOPHORUS, VII. 544, XI. 271.

### CRY—CUB

CRYPT, VII. 545—Crypta, ib. Cryptangia, fossil corals, XVII. 97. Crypticus, genus of insects, IX. 130 Cryptocephalus, genus of insects, IX. 149 Cryptocerus, genus of insects, IX. 194 Cryptodon, fossil mollusks, XVII 107 Cryptodontia, fossil reptiles, XVII 141 CRYPTOGAMIA, VII. 545—arrangement and characters of, V 216. Cryptogamic plants, V. 76-embryogeny

ın, 155 CRYPTOGRAPHY, VIL 545 Cryptolite, mineral, XV 101. Cryptomycteres, section of fishes, XII. 232. Cryptonyx, genus of birds, XVI 791

Cryptopoda, crustacea, VII. 541 Cryptops, genus of myriapods, XV. 750

Cryptuss, genus of inyrapods, XV. 750 Cryptuss, genus of insects, IX. 189 Crystal, VII. 545—crystals, in mineralogy, XV. 40—dichroism of, I. 915—cavities in, VII. 549; XIV 806—Sir H. Davy on the fluids in the cavities of, 672-Beccaria on double refraction in, IV. 560—their property of dividing rays of light, XIII. 452—of snow, XIV. 659 -imperfections of, XV. 49-measurement of, 50-twin-crystals, 51-irregular aggregation of, 53-biaxal crystals, I. 913, XVI 541-double refraction in crystals with one axis, 626, 629, in crystals with two axes, 630, 631, I 905, with three, XVI 633, with planes of double refraction, 1b -singly polarizing crystals, 647-rings produced by uniaxal, 651; by biaxal, 652-conical refraction in biaxal crystals, 656planes of double refraction, 661-com posite, ib -as microscopic objects, XIV. See Crystallization, Optics.

or flint-glass, X. 672. Palace, IX. 454—Phillip's Guide to, and Picture Gallery of, XVII 515-of New York, XVI. 225-at Sydenham, XX. 891.

CRYSTALLINE, VII. 545—heavens, 1b —derivation of crystalline forms, XV 42; relation of optical characters to, I 914 -rocks, XV. 136, XVIII. 619, in Scotland, XIX, 791.

lens of the eye, VII 545; III. 44; XIII. 461; XVI. 541—in various animals, III 95-in fishes, XIV 771, 805

CRYSTALLIZATION, VII 545; VI 445; XV. 129—of snow, XIV 659—methods employed to produce, VI. 447—systems of. XV 41-structure of, producing polarization, XVI. 681. See Crystals, Optics. Cshatriyas, caste, VI. 318; XI. 471.

Ctenacanthus, genus of fossil fishes, XII. 839, XVII. 117. Ctenicer, genus of insects, IX. 106.

Ctenistes, genus of insects, IX. 153. Ctenodes, genus of insects, IX. 144. Ctenodonta, fossil mollusks, XVII. 106,

Ctenodus, genus of fossil fishes, XII. 341. Ctenoid order of fishes, XIL 216-fossil, 333, 843; XVII. 127.

Ctenoïdei, order of fossil fishes, XII. 343; XVII 127.

Ctenolabridæ, family of fishes, XII. 265. Ctenolabrus, genus of fishes, XII 267 Ctenolepis, genus of fossil fishes, XII 337. Ctenomys, fossil species of, XVII 173. Ctenophora, genus of insects, IX. 227. Ctenopoma, genus of fishes, XII 290. Ctenoptychius, genus of fossil fishes, XIL

Ctenostomata, polypes, XXI 1002. Ctenus, genus of arachnides, III. 382 Cteristes, XI. 385.

CTESIAS, Greek physician, VII. 564—his notice of Nineveh, XVI. 278—his skill in surgery, XX 811. CTESIBIUS, VII 564—hydrodynamical in-

ventions of, XII. 69. CTESIPHON, Assyrian city, VII. 564; XVII.

435. - a Cretan artist. VIL 564.

CUB, VII 564.

CUBA, VIL 564; XXL 887-population of, II. 708-metallic produce of, XV. 248-Poey's work on the lepidoptera of, IX.

#### CUB-CUL

18—sugars of, XX. 795, 796—its to-bacco, XXI. 294, 295—weights and measures of, 810.

Cuban, mineral, XV. 117 Cubature of solids, IX. 734.

CUBE, VII 569; X. 535-its frequency in crystalline forms, VL 445-in mineralogy, XV. 41.
——ore, XV 102.
Cube-root, VII. 569—extraction of the,

III 606-discovered by the Arabians, I 699

CUBEBS, VII. 569; V. 207; XVII. 404. Cubic equations, II. 516—resolution of, IX. 302

Cubical coal, VII. 118. Cubicularii, VII 569; VI 408. Cubières (Despans), accused of corruption, X. 228

-river navigation, 63.

Cuboit, mineral, XV 75 Cuchullin hills, in Skye, XX. 317. Cuckmere, river in Sussex, XX. 839

Cuckoo, VII. 569; XVI. 777 -- honeycuckoo, IL 218-Dr Jenner's paper on, XII 721

Cuckoo-pint, plant, V 214, 115 Cucujus, genus of insects, IX. 143 Cucullæa, genus of mollusks, XV 349-fossil, XVII. 106.

Cucullanus, genus of entozoa, XXI. 981 

CUCUMIS, genus of plants, VII 569, V. 193 Cucurbitacese, nat order of plants, V. 192. Cudbear, dyestuff, VII 569, V. 217; VIII 285, 286; XIII 515

CUDDALORE, in Hindustan, VII. 569
CUDDALORE, in Hindustan, VII. 569
CUDDAPAR, in Hindustan, VII. 569, 570.
Cuddy, fish, XII 269
CUDWORTE (Raiph), VII. 570; I 341—
on motal distinctions, 20, n 3—one of the first successful antagonists of Hobbes, 43—on perception, 1b, n 3influence of his principles on theories of morals, 44—his Intellectual System, ib., 341—his Treatise concerning Eternal and Immutable Morality, 342, 192, 3-his unpublished MSS., 192, n 3, 342; VII 570—on the materiality of angels, III 309, n—on the philosophers who maintained that moral dis-

tinctions were created by human law, XV 549-on the obligation of subjects to obey their rulers, XV. 550.

CUENCA, in Spain, VII. 570.

town in Ecuador, VII. 570—valley

of, VIII 386 CUFF (Henry), VII. 570. Cunaba, XIV. 358. CUIRASS, VII. 570; III. 665 and n. CUIRASSIERS, VII. 571.

CUISSES, VII. 571.

Cujas, or Cujacius (Jacques), civilian, VII. 571 — his editions of the Theodosian Code, VI. 744—Fabrot's edition of his works, IX. 466.

CULDEES, VII 578; XII 441; XIX. 750. Culello sandstone, XX. 711—its resistance to crushing, 718.

Culeus, Roman measure, VII. 573. Culex, genus of insects, IX. 224.

Culmary utensils, XV. 440
Cullen, in Banfishire, VII 573; IV 412
— (Dr William), VII 573, XIV 462
—his connection with Dr Black, IV. 737—Brown's opposition to his medical doctrines, V. 682—his definition of insanity, XIV. 526—his connection with Dr W. Hunter, XII. 29, 30—on Stahl's system of medicine, XX. 582.

CULLERA, Spanish town, VII. 575 Culley (Messrs), their improvements in

agriculture, II. 263. Culling and Bradford's photo-lithographic

process, XVII 554. CULLODEN, in Inverness-shire, VII. 575; XII. 440—battle of, V. 461.

### CUL-CUP

sures, XV. 204 - in Pembrokeshire, XVII 374.

CULMINATION, VII. 575 CULNA, in Hindustan, VII 575 CULPEE, town in Bengal, VII 575 CULROSS, in Perthshire, VII. 575, XVII. 459

Cultellus, genus of mollusks, XV 350. Cultiviosities, tube of birds, XVI 797.
CULVERIN, VII. 575
CULVERT, VIII. 575
CULVERTAILED, VII. 575

CUME, or Cuma, VII 575; XV 782; XIX. 304—sibyl of, XX. 234; II 648 CUMANA, in Venezuela, VII. 576, XXI. 537.

Cumanus (Marcellus), the first author who describes the venereal disease, XX. 817, 2 3.

CUMBERLAND, VII. 576-Cambrian rocks of, XV 196 - Cambro-sılurıan rocks, 197-Upper Siluman, 198-state of bas tardy in, XVIII. 296, n 3—its annexation to Scotland, XIX. 745—population and value of property, VIII. 754

- (RICHARD), bishop of Peterborough, VII. 578; I 339—his work De Legibus Naturæ, 46, 339—the only professed answerer of Hobbes, 339—his ethical doctrines, 340, XV 553

his comedies, VIII. 166—his novels, XIX. 275

- (William, Duke of)-his proceedings in Flanders and Scotland, V. 460, 462, 464-his death, 470,

capital of Alleghany county, North America, VII. 578

- in New South Wales, IV. 278, 282, 284 presbyterians, in America, XVIII.

river in North America, VII 578.

XIII. 69, XXI 155-mountains, 1b. CUMBRAE, Islands, VII. 584; VI. 27. Cumbrian rocks, XXI 842

Cuming (Hugh), his collection of shells, XV 328—on the anatomy of Discina lamellosa, 339.

CUMMIN seeds, VII 584.

Cumming (Mr), his escapements, VII 13.

(Professor), on thermo-electricity, XXI 650, 653.

(Rev. J G.), his description of the Isle of Man, XIV. 242, 243. CUMNOCK, village in Ayrshire, VII. 584. Cumulo-stratus, cloud, XIV. 656. Cumulus, cloud, XIV 655.

Cundinamarca, in New Granada, X. 797.
Cuneco (Domenico), VII. 584
Cuneiform, VII. 584—bones, III. 36cartilages, 50.

inscriptions, VII 584; XVII 530—at Nineveh, XVI. 272, 275—discovery of the key to, XVII. 534.

Cuneo, in the kingdom of Sardinia, XIX.

Cunette, in fortification, VII. 602 CUNINA, goddess, VII 584. Cunio, block-printing by, XVIII 522. CUNITZ (Maria), VII. 584.

CUNNINGHAM (Allan), poet, VIL 589; XVIII. 127.

(ALEXANDER), civilian, VII 584. (ALEXANDER), historian, VII 588.

(Allan), botanist, his explorations in the interior of Australia, IV. 255death, 256. - (John), on impressions on rocks,

XVII 131 - (Peter), his Handbook of London,

XIII 674. (district of), IV 332. Cunobeline, ancient British king, his improvement of the coinage, VII. 70;

XVI. 362. CUNOCEPHALL, VII. 589; XL 386, n. 4. See Anubis.

Cunomaceæ, nat order of plants, V. 194. CUPAR-ANGUS, VII. 589. CUPAR-FIFE, VII 589, IX. 545, 546.

#### CUP—CUR

CUPEL, VIL 590; III. 770-Cupellation, 1b, XIII 299

Cupluc letters, IL 616.

CUPID, VII. 590

CUPOLA, in architecture, VII. 590; III. 410, 508 See Dome

- furnace, XIL 545 CUPPING, VII 590—cuppers, XIV. 464. See Bloodletting.

CUPREOUS, VII 590.

manganese, XV 112 Cupressinæ, plants, V 209.

CUPRESSUS, genus of coniferous plants, VII. 590; V 209. Cupnte, XV 112

Cuproplumbite, XV. 117

Cupulifera, nat order of plants, V 208 Cupulispongia, fossil sponges, XVIL 93 CURAÇOA, island, VII 590.

- a liqueur, IX. 760. Curasses, buds, XVI 758.
CURATE, VII 590, VIII 748
CURATOR, VII 590—of a university, 591.

CURATORES, various kinds of, VII 591. CURB, VII 591-in building, V 739 the, in domestic animals, XXI, 559

Curby-hocked, XXI 559. CURCAS, VII 591

Curculio, genus of insects, IX 139; XXL

Curculionites, tribe of insects, IX. 138 CURCUMA, genus of plants, VII. 591; V 211.

CURD, VII 591-management of, in cheesemaking, 625

CURES, ancient town of Sabinum, VII 591 CURETES, VII. 591, 422, 493, 615, VI. 46 Cureton (Rev. Mr), on the Epistles of Ignatius, XII 360.

CURIA, VII 591; XIX. 296, 316

CURIATII, VII. 592

Curilees, language of, XIII 217 Curimatus, genus of fishes, XII. 246. Curio, VII 592.

CURIOSI, VII 592. CURISCHES-HAFF, VII. 592; XVIII. 662,

CURLEW, VII 592; XVL 802. CURLING, VII 592 Curll, XVIII 332, 333 CURMI, ancient liquor, VII 592 Curr (Mr John), his improvements in

mining machinery, VII. 126-his ropes, XIX. 408, 410

Curragh of Kildare, XII 81

CURRAN, in Hindustan, VII 592.
CURRAN (John Philpot), VII 592.
CURRANT, VII 593; V. 194—culture of currants, XI. 177—in Greece, 16—in Ioman Islands, XII 445, 458—value of the imports of, VIII. 734-raisins of, XVIII 799

CURRENCY, VII. 593—suppression of small notes in 1826, V 644—limit of depreciation in a gold or mixed, XV. 427amount of gold and silver employed in the currency of Great Britain, XVIII. 465-of Chile, VI. 552; Canada, 155; South Australa, IV. 297; Victoria, South Australa, IV. 297; Victoria, 299; New South Wales, 285, Ireland, XII 526; Cuba, VII 567, France, XI 262; Norway, XVI 328; Greece, XI 15; the Two Sichles, XX 249; Spain, 491; Turkey, XXL 384; Tuscany, 394 See Coin, Coinage, Commerce, Credit, Exchange, Numismatics, Money.

CURRENT, VIL 593-marks made by currents on rocks, XV. 159-velocity of river currents, XVI. 78.

—— (electric), XXI 100 and n. 1—in-tensity of, 622—direction of, 622—denved, 624 - mutual action of, 639 See Electricity.

CURRENTS of the ocean, VII. 593; XIV. 652, X. 483; XVII. 577—of the Mediterranean, XIV. 470-of the Firth of Forth, IX. 793—of the Straits of Gibraltar, X. 620—tide currents, XVI. 66—of the Pacific Ocean, XVII. 40—in the Polar Regions, XVIII 176.

### CUR-CUT

CURRICLE, VIL 593

CURRICULUM, VII. 593—in universities, XXI 475 et seq. CURRIE (James), M D, VII. 593—on bath-

ing, IV. 500 et seq—his acquaintance-ship with Dr Brown, V 683—his Lue of Burns, VI. 20 CURRIER, VII. 595 See Currying.

Curruca, genus of birds, XVI 756. CURRY-COMB, VII. 595 Curry-powder, IX. 765-adulterations of,

CURRYING of leather, VII. 595, XIII. 809. CURSITOR, VII. 595—baron, 1b

Cursoria, family of insects, IX. 155 Cursorius, genus of birds, XVI 797. Curt (M.), his report on Cherbourg break-water, V. 302

CURTAIN, in fortification, VII. 595. CURTESY, in Scotch law, VII. 595. Curtis (Dr), his letter to Duke of Wellington on Catholic emancipation, V. 654

(G T), on the American constitution, XXL 755

- (J.), his works on insects, IX. 14on insects, 82, 86 et seq. (Port), IV. 301

- (W), his works on insects, IX. 6 

account of the Amazons, IL 651 CURULE-CHAIR, VII. 596—curule magis-trates, XIX. 316

CURVATURE, of a line, VII. 596-of the conic sections, 285-radius of, LX. 706

—curvature of beams, XX 762 Curved motion, VIII 357 et seq. Curves, in geometry, VII. 596—of equable approach, ib .- algebraical or geometrical, ib; II. 545 — transcendental or mechanical, VII. 596; II. 545—anticlinal and synclinal, in geology, XV. 170—causic, VI. 344—involution and evolution of, VIII. 259—determination of tangents to, IX. 701—generation of, by evolution, 706—contact of, 709 quadrature of, 731-rectification of, 733 -determination of the equations to curves from the knowledge of their properties, X 543; of their forms and properties from their equations, 545 deduction of properties of curves from their equations and known properties, 551—elastic, IV. 672—curves on the

surface of a fluid in capillary tubes, VI 214, 215-magnetic, XIV 46 Curwen (Mr), on the effects of the cottage-

system in Ireland, VII. 431. CURZOLA, Island, VII. 596

Curzon (Hon. Robert), his work on the Monasteries of the Levant, XIII. 884on MSS in Italian libraries, 416, 417.

CUSA (Nicolo de), VII. 596—on geometry, X. 504—on the squaring of the circle, XX. 520. Cuscutaceæ, nat. order of plants, V. 201. Cush, VII. 596, VIII. 45

Cushat, bird, XVI. 793. CUSHION, in engraving, VII 596; VIII. 802—in gilding, X. 625

Cuse, in astronomy, VII 596—in astrology, ib—in architecture, ib.; III 508. Cuspinian (John), VII. 596

Custard-apple, order of plants, V 180. Cusrom, m a legal sense, VII. 597—a source of law, XIII 258—its influence on morals, 259; XV. 543—its influence in China, VI. 593

Custom-House, VII. 597—fallacy of custom-house returns, 190, 192—London, XIII 662

Customs, VII. 597—duties, XXI. 59, 62, 63—articles on which the customs are repealed, 62-not inconsistent with freetrade, ib.—amount of, in the port of London, XIII. 662—Consolidation Act, VIII. 737-of Scotland, XIX. 808

CUSTOS BREVIUM-Rotulorum, VII. 597. Cutaneous affections, in domestic animals, XXI, 578

Cutbush's electrical lamp, VIII. 625. Cuton, or Terra Japonica, VII. 597; VI.

### CUT-CUY

CUTCH, in Hindustan, VIL 597, XL 446, 449, 463

GUNDAVA, in Beloochistan, VII. 599; IV 640, 641. CUTHAH, VII. 599.

Cuthbert (Mr), optician, XIV. 786-his microscope, ib Cuthbert's (St), beads, XVII 98

Cuthbertson (Mr), his electrical apparatus for oxidating metals, VIII 593—his experiments with it, ib—his electrical kites, 608—his condenser of electricity, 614—his balance-electrometer, 620—his

an-pump, XVIII 43 Cuthill (James), his work on the cultivation of the potato, IL 316, n. 1.

CUTICLE, VII 600, II 834, 836; XIII 305-of the mucous membrane, II 836 -the seat of colour in the human species, VII 223—of plants, V 74—appendages of, ib—in the crustacea, VII 537.

353

Cutlu-Moses, VII. 314, 316. CUTTACK, in Hindustan, VII. 602; IV.

CUTTER, VII. 602, IV 800

- in horses, XXI 562.

in railways, &c., VII 324, 325, XVIII. 759

XVII. 113.

CUVETTE, in fortification, VII 602 CUVIER (G. Leopold-Christian-Frederic-Dagobert), VII. 602—on Bonnet's definition of moral liberty, I 268—his method of estimating the relative proportions of the skull and face, II. 80 his works on comparative anatomy, and on fossil bones. III 113-on the classification of animals, 172, 173, 183, 192-on the study of science by persons of rank in Britain, VI. 350 the character of Cavendish, 354, 355; and of Ray, XIV. 125-his Regne Animal, 127—on Spix's cramological views, XVI 501—on birds, 729, 730—his ments as a zoologist, 1b -on the differences between animals and plants, III. 170on the harmony of organs in animals, 172 - the benefits he has conferred on natural history, 183-on living beings proceeding from others of the same kind, 175—his classification of arach--his classification of arachnides, 367—on the infusoria, 194—on the progress of ichthyology, XII. 204 and n. 2-on fishes, 204, 205 et seq. —his criticism on Gmelin's Systems Nature, X. 685, XVI. 729—on the scientific value of glass, III. 198—on the mollusca, XV 319, 320 et seq—on the annelides, XI. 298, 294—on the teeth, XVI. 408 et seq-his system of odontology, 478; objections to it, 479, 480-on the plesiosaurus, XVII. 146on the restoration of extinct mammals from their osseous remains, 156, 157. 159, 160, 171-on Pliny's Natural History, XVIII 11-on reptiles, XIX. 15. 16, 23, 24 et seq.—on zoophytes, XXI. 978 et seq.—his arrangement of intes-

- (Frederick), his amendment of the Linnæan system of zoology, III. 183—on the teeth, XVI. 409.

tanal worms, 981.

and Valenciennes, their joint work on fishes, XII. 204, n 2, 328. Cuvieria, genus of mollusks, XV. 360. CUXHAVEN, in Germany, VIL 606; XI.

Cuyahoga, river, XVI. 489. Cuyp (Albert), XIII. 137. See Kuyp.

#### CUY—CYL

Cuzco, in Peru, VII 606; XVII. 470, 474, 593—temple of the sun at, 461. Cyami, crustacea, VII. 542 Cyanic acid, VI. 474 Cyanichthys, genus of fishes, XII. 314. Cyanite, mineral, XV 86 Cyanogen, VI. 473-specific gravity of, XII. 89

Cyanogene, gas, XIV 438 CYANOMETER, VIL 606, XVI 692, XIX.

Cvanose, mineral, XV 97 Cyanuric acid, VI 474 Cyathaxonidæ, polypes, XXI. 1005 Cyathophyllidæ polypes, XXL 1005-fossil, XVII 96

Cyathophyllum, fossil corals, XVII 96 CYATHUS, ancient measure, VII. 606

CYBEBE, VII. 606 CYBELE, VII 606; I. 457-her priests,

VII. 422 Cybium, genus of fishes, XII. 296-fossil

Cycadaceæ, nat order of plants, V. 210-in Africa, II. 216-fossil, V 236, XVII

Cycas, genus of plants, V 210. CYCEON, VII 607 Cychla, genus of fishes, XII 265. Cychrus, genus of insects, IX. 96 CYCLADES, islands, VII 607, XI. 10, 13, 19

Cycladidæ, family of mollusks, XV. 350 XVII. 107

Cyclarthrus, genus of fossil fishes, XII. 342

CYCLAS, VII 607

- genus of mollusks, XV. 347, 350 CYCLE, VII. 607; VI. 664-of indiction. VII 607, VI 81, 673—of the moon, VII 607; VI 81—solar, VII 607, VI 80—Drudical, VIII 186—Egyptian, 450, 451

Cyclica, genus of insects, IX. 148 Cyclichthys, genus of fishes, XII. 314. Cyclidium, genus of animalcules, III 201.

Cycloganoide, fossil fishes, XVII 126 Cycloga, VII 607; L 555; X 545—first indicated by Galileo, VII 267; X. 505

—Pascal's solution of the problems re-

order of fishes, XII. 216-fossil 333, 345

Cyclo-labridæ, or cyclo-labroids, fishes, XII 265, 266,

Cyclopoma, genus of fossil fishes, XIL 343.

Cyclopterus, genus of fishes, XII 306, 307. Cyclostoma, genus of mollusks, XV. 375
—fossil, XVII. 11.

Cyclostyle, in architecture, III, 508.

CYGNUS, VIL 607, XVI. 815 - constellation, VII 607: IV. 79 Cylas, genus of insects, IX. 138.

CYLINDER, in geometry, VIL 607; X. 540, 558-development of the curve surface of, 495—cylindric saws, XIX. 678—cylinder valves of steam-engines, XX. 581-sections and development of, in masonry, 727, 728-to find the lines

#### CYL—CYR

when it is intersected by a portion of a cone, 731 Cylinders, boring of, V. 43-mensuration of, XIV. 514-of steam-engines, XX. 597 et seq Cylindrical egg-end steam-boiler, XX. 615 -double-flue boiler, 616.

CYLINDROID, VIL 607 CYLLENE, VII. 607, XI 11. Cyllenia, genus of insects, IX. 234. Cylon's conspiracy at Athens, IV. 194 CYMA and Cymatium, in architecture,

VII 607, III 468, 476, 508 Cymba, genus of mollusks, XV. 364 CYMBAL, VII 607, XV 713 Cymbirhynchus, genus of birds, XVI 757 Cymbulia, genus of mollusks, XV 360 Cyme, in botany, V 116

Cymindis, genus of birds, XVI. 743. Cymophane, mineral, XV 87 Cymothoada, crustacea, VII. 542. Cymri, XXI 685

CYNEGIRUS, VII 607.

CYNANCHE, disease, VII. 607 CYNANCHUM, genus of plants, VII. 608; CYNARA, genus of plants, VII. 608, V

197. See Artichoke Cynarocephalæ, sub-order of plants, V 197.

CYNICS, VII 608 Cynips, genus of insects, IX. 192. Cynocephali, VII 589. Cynocephalus, genus of mammalia, XIV.

141-dentition of, XVI 456 Cynodon, genus of fishes, XII 247. Cynogale, dentition of, XVI 460 CYNOPHONTIS, Grecian festival, VII 608 Cynopolis, ancient Egyptian city, III 288. Cynoptamus, genus of fishes, XII. 247. CYNOSARGES, in ancient Athens, VII 608.

IV. 170 CYNOSCEPHALE, mountains in Thessaly, VII 608

- batile of, XIX. 312. CYNOSURA, VII. 608 CYNOSURE, constellation, VII 608. CYNTHIA and Cynthius, VII 608 genus of insects, IX. 208

genus of mollusks, XV. 231, 333. CYNURIA, VII 608 Cyperaceæ, nat order of plants, V 215. CYPHONISMUS, ancient mode of punish-

ment, VII 608 Cypræa, genus of mollusks, XV. 384 Cyprædæ, family of mollusks, XV. 384

fossil XVII. 110. CYPRESS, VII. 608, XVII 765; XI 748-specific gravity of the wood, XII 89 - tribe of plants, V. 209.

Cypricardia, genus of mollusks, XV. 350
—fossil, XVII. 107.

Cyprina, genus of mollusks, XV. 350fossil XVII 107. Cyprine, XV. 85.

Cyprinidæ, or Cyprinoids, family of fishes, XIL 256, 255—teeth of, XVI. 425—kinds used for food, IX. 764—Himalavan, XI 444.

Cyprinodon, genus of fishes, XII 252 Cyprinodontei, family of fossil fishes, XII

Cyprinodontidæ, family of fishes, XII Cyprinoider, family of fossil fishes, XII.

346 Cyprinus, genus of fishes, XII 257-

angling for different kinds of, III 160, 161. Cypris, fossils, XVII. 101-C. ornata. VII.

543. CYPRUS, VII 609-taken by Selim II., XXL 369-coms of, XVI 377-wines,

XXI. 886. - Kmghts of, VII. 610. CYPSELUS, father of Periander, VIL 610,

- genus of birds, XVI. 758. CYR (St), in France, VII. 610.

(St), Gouvion, X. 154, 178. Cyran (M. de St), on annuities, XIL 400

368.

### CYR-DAC

Cyrena, genus of mollusks, XV 359fossils, XVII 107. CYRENAICA, in Africa, VII 610.

- Patriarch of Alexandria, VII 611

Cutler (Mr), his patent fire-place, XX.

Cutlers, diseases of, XIV 442-Company and Feast, XX. 97.

CUTLERY, VII. 600—of Sheffleld, XX. 96-Switzerland, 890—Namur, XV. 772

651. CUTTERAH, in Bengal, VII. 602 Cutting of diamonds, VIII 4, 813.

Cuttings, propagation by, XI 693, 694, 703; V. 167; XVII 767

Cutting's rope-machine, XIX. 410 CUTTLE-FISH, VII. 602, XV. 398—fossil,

Cutts (John, Lord), VII. 602.

Cyclobranchiata, mollusks, XV. 379 — fossil XVII. 127.

lating to, XVII. 324.

Cycloides, order of fossil fishes, XII. 345, 346 - acanthopterygei, 345 - malacop-

teryger, 346.

Cyclomus, genus of insects, IX. 139. Cyclones, or whirlwinds, XIV. 649. CYCLOPEDIA, VII 607, VIII 654. CYCLOPEAN, VII 607, 420; III. 482, 440; XI 21; XIX 642, XX 710

CYCLOPS, VIL 607-quadricornis, 543.

Cyclostomata, polypes, XXI. 1002 Cyclostomidæ, family of mollusks, XV.

Cyclurus, genus of fossi fishes, XII. 347. Cyclurus, genus of fossi fishes, XII. 347. CYDER, VII 607. See Cider. CYDLAS, painter, VII. 607 CYDNUS, river, VII. 607; VI 722. CYDONIA, VII. 607, 41

- the quince, VIL 607 See Quince.

CYRENAICS, VIL 610 CYRENE, VII 611, 610-dispute with Carthage, VI. 281 CYRIL (St), bishop of Jerusalem, VII 611 -alphabet of, II 614 Cyrillaceæ, nat order of plants, V 185. Cyrillo (Dominique), his work on insects, IX. 7. Cyrillus Lucaris, Alexandrian MS presented to Charles I by, II 474. Cyrtandraceze, nat order of plants, V 200 Cyrtia, fossil mollusks, XVII 103, 104 Cyrtoceras, fossil mollusks, XVII. 112 Cyrtolites, mollusks, XV. 375 - fossil, XVII 109 Cyrtoma, genus of insects, IX. 242 Cyrto-prostyle, in architecture, III 508. Cyrto-style, in architecture, III 508 Cyrtus, genus of insects, IX 236 Cyrus, VII 611, XVII 434—his military achievements, III 622, 623-capture of Babylon by, IV. 346—his treatment of Crossus, VII. 507—his restoration of the Jews, XII 782, 767—his war with the Lydians, XIII. 748-Xenophon's connection with, XXI, 950 - the Second, VII 612-assistance from the Spartans in the expedition against Artaxerxes, XX. 501. CYST, VII. 613. CISTIC. VII 613 Cystica, zoophytes, XXI. 978, 976. Cysticercus, genus of zoophytes, XXI. 974, 976, n 1, 978. Cystidea, in botany, V. 147 Cystiphyllidæ, polypes, XXI 1005. Cystiphyllum, fossil corals, XVII. 97. Cystoidea, fossil echinoderms, XVII. 99. Cystophora, dentation of, XVL 463 CYTHERA, island, VII 618; XII. 454. Cytherea, genus of mollusks, XV. 350—fossil, XVII 108. Cytinaceæ, nat order of plants, V. 209. Cytoblast, V 67, 73 Cyxii, insects, IX. 169. CYZICENA, VIL 613. CYZICUS, town of Mysia, VII 613, XV. 751—coms of, XVI 374. CZAR, VII 613, XIX. 524. CZASLAU, town in Bohemia, VII 613.

# D

Czerny (Caspar), his works on insects, IX. 24

CZEGLED, town in Hungary, VII 613.

Czekh language, IX. 392.

- (George), XX. 62.

D, letter of the alphabet, VII. 614-in abbreviations, II. 18 Das (Mr), on the languages of America. XIII 224.

Dab, fish, IX 764. Dabod, in Nubia, temple at, XVI 349
Dacca, in Bengal, VII. 614—muslin
manufactures of, IV. 650; VII. 438,

and n. 1; partly superseded by British goods, XI. 460. - JELALPORE, VII. 614, X. 352. DACE, VII. 615—angling for, III. 161.

Dacelo, genus of birds, XVL 773. DACIA, VIL 615. Dacians, their wars with the Romans, XIX. 340, 341-language, XIII. 214.

DACIER (André), VII 615.

(ANNE LEFÈVRE), VII 615.

Dacne, genus of insects, IX. 115. Dacnis, genus of birds, XVI. 763 Dacotas, their belief as to a future state, II. 681.

DACTYL, VII 615; IX. 770. Dactylethra, genus of reptiles, XIX. 78. DACTYLI IDÆI, VII 615, 493. Dactyliomancy, VII. 615. Dactylobranchiata, order of mollusks, XV.

DACTYLOLOGY, VIL 616, 679.

#### DAC—DAL

Dactylopterus, genus of fishes, XII 280, Dactylota, genus of echinoderms, XXI Dacus, genus of insects, IX. 255. Dado, VII 616; III 508. DADUCHI, priests of Ceres, VII 616. Dadur, in Beloochstan, VII. 616
DEBALA, in Lycia, VII 616
DEDALLS, VII 616, 494; XIX. 852.
DEMON, VII. 616; III. 310, X. 450; I. 458-of Socrates, XX. 390 Dæmoniac, VIL 617—Farmer on demo-niacs, IX. 483. Daendels (General), IV 496 Dafila, genus of birds, XVI. 818 Daghestan, in Asia, VII. 619, VI 340, Dago, island in the Baltic, VII 619. Dagobert, X. 6. DAGON, VII. 619, 716. Daguerre (M), his discoveries in photo-graphy, I. 922; XVII. 545, 546 DAGUERREOTYPE, VII 619; I. 922, 923,

XVII. 545, 546. DAIL (Michael), portrait painter, VII (George), his works on insects, IX.

12 Dahlbom (A. G.), his works on insects, IX. 17, 24.

DAHLIA, VII 619—culture of, XI 753

Dahlmann on Herodotus, XI 356 DAHOMEY, in Africa, VII. 619; II. 227-tribes of, IX. 352

Dahshoor, pyramids of, VIII 502 Daillé (Jean), VII 620. - (M.), his edition of Scaligerana, II. 738.

DAIMIEL, Spanish town, VII 621 Daimonnisol, or Prince's islands, XVIII. 518.

Daines (Mr), his patent for preserving stone, cement, &c, XX. 735

DAIRI, Japanese pontiff, VII 621
DAIRY, VII 621—breeds of cattle, IL 342 —darries in Cheshire, VI 529; in Argyleshire, III. 527—in Denmark, VII 747-husbandry of Lombardy, XIII. 651, 652-in Ireland, XII. 518-Lanarkshire, XIII 175. See Butter, Cheese, Milk.

DAIS, VII 626; VI. 327. Daisy, as an edging, XI 748.
Dajaus, genus of fishes, XII 291.
Dalby (Mr), employed on the Ordnance survey, XXI. 331. Dalecaria, in Sweden, VII. 626 Dalechamps (Jacques), VII. 626. D'Alembert, VII. 626 See Alembert

DALGARNO (George), VII 626—author of the first English work on a manual alphabet for the blind, 616—his profound conclusion regarding the senses, I 248-works of, 285.

Dahbard on the resemblance between hightning and electricity, VIII. 582. Dahn, Swedish author, XIX. 698. DALKEITH, VII. 626.

Dalkey island, VIII. 215. Dallas (W. S), his works on insects, IX 19.

Dalman (John William), his works on insects, IX. 13. DALMATIA, VII. 626; IV. 311, 309.

Dalmatian alphabet, II. 614. Dalriads, V. 375

DALRY, in Ayrshire, VIL 627. Dalrymple (Alex.), on the supposed southern continent, IV. 252

— (JAMES, Viscount Stair), VII 627—on the Canon Law, VI. 191—on the reception of the doctrines of Spinoza and Hobbes, I 105, n. 4—his Physiologia Nova Experimentalis, 285. —— (Sir David), Lord Hailes, VII. 633

on profane swearing in Scotland, VIII. 249, n. 1—list of his works, VII. 635, 636—on John Barclay, IV. 439, 440, 441—his character of Malcolm III. of Scotland, XIX. 748; of David I., 782.

- (Sir Hugh), VII. 632. - (Sir James), VII. 632.

#### DAL-DAN

Dalrymple (Sir John), VIL 631, 632. (Thomas), M.D., VII 632.
Dalton (John), LL D, VII 637; I 938; XIV 259-his writings, L 934-his theory of hygrometry, 1b—on the at-mospheric gases, IV. 180, 181; I. 934 dew-point experiment, ib -on aurora borealis, IV 246, 248; XIV 14—on oxymurate of lime, IV 763—his atomic theory, VL 444; L 935, 936-on evaporation, IX. 408 et seq -on heat, XI 268 et seq —on the elasticity of aeriform bodies, 270 — on the laws of mixed gases, I. 935; his mechanical ideas on this subject, ib -on the expansion of the gases by heat, ib.; XL 268 - his laws of chemical combination, I 936reception of his views in England and France, 938-on the coefficients of expansion of gases, 957, n 4-contrasted with Cavendish and Black, in his early cucumstances, 933-his death and character, 939-on magnetism, XIV. 12, 14, 55, 66-on latent heat, XX. 555-on

the elastic force of steam, 557, 558. Dalyell (Sir John G), on holothurae, XXI 985

DALZIEL (General), V 428. - (Prof), XXI. 963. DAM, VII. 638.

Damagram, in Central Africa, VII 638. Damalis, Egyptian deity, XI 385. Daman, in zoology, XIV 199. Damar, Arabian town, VIL 688.

- a kind of resinous exudation from trees, VII 638-used by varnish-makers, XXI. 526.

Damascenus (Joannes), VIL 638.

(Nicolaus), VII 638

DAMASCIUS, philosopher, VII. 638 DAMASCUS, VII. 638; XX 901, 904— sword-blades of, VII 600—fine steel of, 641—gun-barrels, XL 97—occupied by osi-gun-barrels, Al. 97—occupied by Saladın, VIII 480; XVII. 196, 197— taken by Es-Sdiih, VIII. 483, by El-Mansoor, 484; by Ibraheem Pasha, 493— —plain of, XX. 903—pashahe of, 905 —Jews, 909—manufactures of, XXI. 383

DAMASK, VIL 641-a fine steel, 1b -manufacture of, at Dunfermline, IX. 545. DAMASKEENING, VII. 641.

DAMAUN, in Hindustan, VII. 641. DAME, VII 641. DAMELOPRE, VIL 641.

DAMERGU, in Africa, VII. 641. DAMIANUS, MARTYT, VII 641, 423 DAMIENS (Robert François), VII. 641; X.

DAMIETTA, town in Lower Egypt, VII. 641; VIII. 479, 483-taken by the cru-

saders, VII. 526 branch of the Nile, VIII 426, 430. Dance (Christian Tobias), VII. 641. Damman (Adrian), VII. 585.

DAMMOODAH, river, VII 641 DAMNII, VII 642; VI. 64; XIX 742. DAMNONII, VII. 642.

Damocedes, Greek surgeon, XX. 810. DAMOCLES, VII. 642. Damoiseau (M), geometer, I 826, 827. Damon, VII 642

Damourite, mineral, XV. 78

Damp See Damps DAMPER, VII. 642.

DAMPIER (William), VII. 642-his discoveries in New Holland, IV. 253, 254— his visit to Papua, 262—New Britain, 264 - Bashee islands, 484; Guahan, XVIII, 269.

Dampierre (General), X. 78 et seq. Dampness, its effect on the weight and

dimensions of bodies, XII. 186.

Damps, in mining, VII 643, 124, 125, 671

See Fire-damp, Choke-damp. DAMSEL, VII. 644

DAN, VII. 644; XVII. 185. Danace, ancient Persian coin, VII. 644; VI. 426 DANAE, VII 644.

Danæaceæ, sub-order of ferns, V. 216. Danaide wheel, XII. 171. Danaides, VII. 644.

### DAN-DAP

Danais, genus of insects, IX. 207 Danaste, XV. 115 DANAUS, VII. 644.

Danby (Lord Treasurer), V 427.

DANCE, or Dancing, VII. 644—French
Academy of, II. 69—not practised in China, VI 581-ardently cultivated by the Cretans and Lacedæmonians, VII. 495 - Pyrrhic dance in Crete, ib .-- in Egypt, VIII. 443-action of the muscles ın, III 42

DANCER (rope), VIL 646, II 115 — (Mr), his microscopic photographs.
XIV 802, 745, XVII. 552
DANCES, stage See Ballet.
— country, VII. 646
DANCETTE, VII. 646

DANCING-GIRLS, VII. 646—in Egypt, IL 600; VIII 448

DANDELION, plant, VII. 646; V 90, 113, 197.

DANDINI, painters, VIL 646. Dandolo (Count), on Lombardy, XIIL 654

et seq

(ENRICO), doge of Venice, VIL 646, 768

Dane river, VI. 529.

DANEGELT, a tax, VII. 646.

Danes, character of the, VII 749—Alfred's wars with, II. 480—their maritime expeditions, VII. 738—massacre of, VIII. 661—England conquered by, ib; VII. 789—their invasions of England, VIII. 657 et seg; of France, X 4 et seg, Ireland, XII. 466, Scotland, XIX. 745; and Britain, XX. 118—their settlement at Waterford, XXI 768, 771 -their north-west voyages, XVIII 169. See Denmark

DANET (Petel), abbot, VII. 646.
Danforth's throstle, VII. 444.
Dangila, genus of fishes, XII 257.
Daniel the prophet, VII. 646—his vision,

VII 612

(GABRIEL), French historian, VII.

—— (John Frederick), VII 647—biographical notice of, I. 984, n—his congraphical notice of, I. 584, 78—Ins. 616—on evaporation, IX. 408, 412, 414—his hy-grometer, XII. 187—his pyrometer, XVIII 703—on the thermometer, XXI. 222—his dissected battery, 618—on electro-magnetism, 639

(Mr), his classification of dogs XL

- (Samuel), poet and historian, VII.

on carp fishing, III. 160—on bar-

bel fishing, 161.
Danish succession, treaty of 1852, relating to, VII 744

balance, IV. 385—ballads, 397—colonies in Greenland, XI. 39—West India islands, XXL 837

- language, VII 750; XIII. 211-Bibles, IV, 702.

Royal Society, VIL 347.

Dankali, Abyssinian tribes, VII. 647, IL

DANNECKER (Johann Heinrich), sculpton,

VII 647. Dannemora, mine of, VI. 778; XX 862. DANTE (Alighieri), VIL 647, XVII 522 -Boccacio's commentary on, IV. 801, 802-Botticelly's illustrations of his Inferno, V 240-poetry of, XVIII. 109-

tomb, 812. DANTON (George-Jacques), French revo-lutionist, VII. 649; X. 86, 87

DANTZIC, VII. 652-corn trade of, 402--average prices and quality of its wheat, 402, 403—commerce of Denmark wheat, 40%, 40%—commerce of Denmark
with, 739—siege of, in 1807, IX. 829—
granaries at, X. 798—port of, XVIII.
670, 676—siege of, by Gustavus Adolphus, XX. 848—gulf of, XVIII. 766.
DANGER, river, VII. 652; IV. 312, 516;
IX. 384; X. 582; XII. 10, XVIII. 605,
646; XIX. 515; XXI. 377—navigation

of, IX. 385; XVI 68-mouths of the, IV 742-operations on, between the Turks and Russians, XIX. 501.

#### DAP—DAS

Dapedius, genus of fossil fishes, XII 334; XVII 126

DAPHNE, VIL 654 DAPHNEPHORIA, Bœotian festival, VII 655.

Daphnis, VII. 655 Daphnomelus, VII. 314 Daphnusa, siege of, VII 318 DAPIFER, VIL 655

Dapsa, genus of insects, IX. 151. Daptrius, genus of birds, XVI. 741. DARABJIRD, Persian town, VIL 655. Dar-al-Baida, in Morocco, XV 596.

DARAPTI, in logic, VII. 655 D'ARBLAY (Madam), VIL 655 See Burney (Frances).

Darby (Mr), his iron bridge, V. 363. (Mr), on the valley of the Missis-

sippi, XV 279. D'Archiac (M), on the flora of Britain, V 231-on igneous rocks, XV. 138-on the cretaceous rocks of the basin of the Seine, 210

DARDANELLES, Straits of, VIL 655: IV

DARDANUS, VIL 655-city, 1b Darent, river, XIII. 65

Danes, a Phrygian, VIL 655. DARFUR, in Central Africa, VII. 655, IL. 229

Daric, gold coin, VII 656, II 131, XVI.

DARIEN, Gulf of, VII. 656.

- Isthmus of, VII 656; XVII. 226proposed canal across, II 711

Scottish colony of, VII 656; V.

444; VIII. 392; XII. 818; XVII 340. DARII, in logic, VII. 660

DARIUS, Persian kings of that name, VIL 660 See Persia.

- Codomanus, XVII 434-his defeat at Arbela, XIII. 763—pursued by Alexander, 1b—mundered by Bessus, 1b—Hystaspis, XVII 434—his visit to

Egypt, VIII 465-limits of Persia, in the time of, XVII. 419.

— Nothus, VIII 466
DARJEBLING, In Hindustan, VII 660
DARLING, Australian river, VII 660; IV. 256; XV 697.

(Dr), on electro-biology, XX. 441. Downs, IV 282, 255

(Grace), IX. 517

(Su Ralph), governor of New South Wales, IV. 273.

DARLINGTON, in Durham, VII 660—
"Hell-Kettles" near, VIII. 267—and

Stockton railway, I. 884. Darmes, his attempt on the life of Louis

Philippe, X 216 DARMSTADT, German city, VII. 660-roof

of the Salle d Exercise at, XIX. 393. Darnel-grass, V 216. DARNETAL, French town, VII 660.

Darnis, genus of insects, IX. 170. Damley jewel, XXI 415.

- (Lord), husband of Queen Mary, VIII. 391; XIX. 783—murder of, 785. Daroca, Spamsh town, VII. 660. Dart, nver, VII. 763

DARTFORD, in Kent, VII. 660-population, XIII 67.

DARTMOUTH, in Devonshire, VII. 661—slates of, XV 199.

DARU (Cointe de), historian, VII. 661.

Darwi (Gonne de), historian, VII. 561.
Darwil (Mr), on the race-horse, XI. 640.
Darweeshees, VIII. 447.
Darwin (Charles), on the geology of the
Andes, II. 670—on cleavage in rocks,
XV. 179—on foliation, 180—on coral
reefs, 217, 218; XVII. 588; XVIII. 292; XXI. 1008—on the parrot-fish, XVI. 427—on volcanoes, XXI. 604, 605, 606; his theory of, 606—his account of the ısland St Thiago, 544.

(ERASMUS), VII. 661 - Dr T. Brown's observations on his Zoonomia, L 410, V. 683 - on the earth-worm, XI. 301 - on the destruction of the planetary system, I 812. Dascillus, genus of insects, IX. 107.

Dascyllus, genus of fishes, XII. 265. Dasmidæ, zoophytes, XXI. 1005. Dasycerus, genus of insects, IX. 142.

### DAS—DAV

Dasypoda, genus of insects, IX. 198. Dasapogon, genus of insects, IX. 234. Dasyprocta, genus of mammaha, XIV. 189 Dasypus, genus of mammalia, XIV 191teeth of, XVL 440, 441. Dasytes, genus of insects, IX. 111 Dasyurus, genus of mammalia, XIV. 175 -dental system of, XVI 447 DATA, in mathematics, VII 662 DATE, VII. 662. See Calendar, Chrononology, Epoch, Era. - fruit of the palm, VIL 662; V. - sugar, XX. 796 Date-plum tree, XVII 764. Date-tree, V 83, 213—in Africa, II 216—in Fezzan, IX 531 DATHAN, VII. 662. Datholite, mineral, XV 94. Datiscaceæ, nat order of plants, V 205. Datisi, in logic, VII. 662. DATIVE, in grammar, VII 662; X. 748 Datnia, genus of fishes, XIL 277. Datmoides, genus of fishes, XII. 277. Datura stramonium, V 202; XVII. 702its poisonous properties, XIV. 438 DAUBENTON (Louis Jean Marie), VII. 662. Daubeny (Dr), his geological account of Ætna, II 192, 193—on the origin of volcanic action, XV 192; XXI 606. Dauber, in engraving, VIII. 803. Daubisson on hydraulics, XIL 112, 113, 121 et seq Daudin on birds, XVI 729—on reptiles, XIX. 33 et seq. DAUGHTER, VII 663 DAULIS, ancient town of Phocis, VII, 663 Dann (General), XVIII 653, 654. Daunau (M.), on the origin of printing, IV. 706 Dauney (William), ancient Scottish music published by, XX. 314. DAUPHIN, VII. 663—Latin classics for the use of. See Delphin. DAUPHINÉ, in France, VIL 663, X. 277. DAURAT (Jean), Fiench poet, VII. 663. Daura, province of Houssa, XI. 776. DAVENANT (John), English prelate, VIL

- (Dr Charles), VII. 664mortality, XV 601—on political eco-nomy, XVIII. 218.

(Sir William), poet, VII 664; XV. 29; XVIII 122, XXI 170, 171 opera by, VIII. 161.

DAVENTEY, in Northamptonshire, VII. 664; XVI. 297

DAVID, the Psalmist, VII. 664; XII. 767— Dr Chandler's Life of, VI. 418—psalms of, XII. 188; XVIII 97, 679. ——— (JACQUES-LOUIS), founder of the

modern French school of painting, VII. 665; XVIL 76.

 I., king of Scotland, XIX. 751.
 II, king of Scotland, XIX. 756. DAVIDISTS, heretics, VII. 666 Davidowich (General), XV 788. DAVID'S (St), city in Pembrokeshire, VII 665; XVII 374.

Davidson (Dr), on the Pentateuch and canon, IV. 695, 697 et seq.

on the brachiopoda, XV. 336, 337,

- printer, XVIII. 538. Davidsonia, fossil mollusks, XVII. 104. Davies (Griffith), his tables of life-contingencies, III. 223; XII. 401, 403.

- (John), his fire-escape, XIII. 438. - (Sir JOHN), VII. 666. DAVILA (Arrigo Caterino), historian, VIL

Davine, mineral, XV. 73. Davis, bucaneer, Easter island supposed to have been discovered by, XVIII. 281.

- (Capt.), VII. 642 (JOHN), navigator, VII. 666; X. 473; XI 39; XVIII 167—his quadrant, IV 351.

- (Mr), his translations from the

Chinese, VI. 577, 580

(Sir John), XII. 480—quotation from his poem on the immortality of the soul, L 253.

#### DAV—DEA

DAVIS'S STRAITS, VII 666, XVIII. 167, 168

Davison, his mode of seasoning timber, XX 169, 170 DAVITS, VII 666

Davoust (Marshal), X. 137, 139, 143-his

occupation of Hamburg, XI 199.

DAVY (Sir Humphry), VII 667—his early history and remarkable genius, L 966 his first papers and experiments on nitrous oxide, 967-his removal to the Royal Institution, ib.—experiments on voltaic electricity, ib—his Bakerian Lectures, 968—testimonies to his scientific character, ib, 969-his researches on chlorine and 10dine, 1b -his extensive popularity, ib -- researches on flame, -his modification of Lavoisier's theory of combustion, 971-his protectors for ships, ib -as president of the Royal Society, 1b—death and philoso-phical character, 1b—practical nature of his inventions, 972 his connection with Faraday, 977 - his opinion of Cavendish, 929-his reception of the atomic theory, 938-on alchemy, IL 452 -his lectures on agriculture, 373-on gypsum as a manue, 415-on the composition of the atmosphere, IV. 180his connection with Dr Beddoes, 566his oxyhydrogen blowpipe, 794-his suggestion of an anæsthetic agent, VI. 631—on electrical light, VIII 547—on electro-magnetism, 532-on falling stars. IX. 479-on salmon fisheries, 609-his Salmonia, III. 164-on Benjamin Franklın, X. 294, n 2-hıs safety-lamp, L 969; VII 124, 671—his account of the papyri at Herculaneum, XL 345, 346-on the influence of a vacuum on the electric spark, VIII 545—his theory of electrical light, 547—on the pyro-electricity of tourmaine, 559—on the torpedo, 574 his theory of irrigation, XII 622the combustion of fuel, X. 353; of gas, 424—on voltaic currents, producing calorific and luminous effects, XXI 626 on the conducting power of metals, 622-on the chemical effects of voltaic electricity, 628

(Dr John), on the torpedo, VIII 574—on the salmonidæ, XII. 225, 238, 239, 330—on the Ioman islands, 445 et seg—on the temperature at which fishes

can live, 330.

Davy's Sound, XL 41. Dawes (Richard), VIL 673.

(Mr), his eye-piece for examining the sun's disk, IV 87—on the faculæ of the sun, 88-on the ring of Saturn, 92 -his catalogue of double stars, 95-his method of observing the magnitude of telescopic stars, 96

DAWLISH, in Devonshire, VII 673 Dawson (J. F.), his work on British beetles, IX. 24.

- (William), drilled turnips on his farm in 1764, IL 263-on the effects of

International Action of the days, 75; I 458, n. 2—sidereal, IV

23—civl, ib.—astronomical or solar, ib. -causes of variations in length of, 23 -days of grace, IX. 443, 446, X. 741-Egyptian, VIII. 450—pagan deities from which named, L 458, n. 2—table for ascertaining the number of days from any one day to any other day, XII

- (John), printer, XVIII. 538. Day's parautoptic lock, XIII 543 Dayman (Lieut. Joseph), on deep-sea soundings in the Atlantic, XX. 26. DAYTON, city in the state of Ohio, VII. 673; XVL 490.

Daze, any glittering mineral, VII. 673. DEAGON, VIL 673; VIII. 743; IX. 280. Deaconess, VII. 673, VI. 641.
Dead, respect for in China, VI. 571. See

Dead-letter office, XVIII. 408-returned or "dead letters," 418.

#### DEA—DEC

Dead-escapement, VII. 8, XVII. 385 Dead-Lights, VII 673—reckoning, 1b ,

Dead-nettle, order of plants, V 202. - white, plant, V 117, 124

Dead-point, in mechanics, XIV 398, 399. Dead-sea, VII 673, III 760, XII 735; XV 145, XVII. 187, 189—its depression below the sea-level, 591—specific gravity of its waters, ib; XII. 89 See Asphal-

Deadly nightshade, XIV 438 DEAF AND DUMB, VII. 674-J C. Amman's mode of teaching the, II 717mode in which the blind communicate with, IV. 778-Condillac on their ideas, VIL 234-Dalgarno on the education of, 626—rights of the XIV 426—hearing-trumpet, XXI. 361—list of works on, VIL 688

Deafness, cases of, cured by glycerine, X. 685.

DEAL, fir-plank, VII. 689 - Norwegian deals, XVI. 328-measurement of deals, XXL 280

- town in Kent, VII. 689-populataon, XIII 67

Deal-fish, XIL 803

DEAN, VII. 689, VIII. 743-rural dean, VII 689—deans in peculiar, ib—dean and chapter, ib, VI 417—of the Chapel-royal, VII 689, VI 416—of a monastery, VII 689-of Guild, ib; XI. 87—of the Faculty of Advocates, VII. 689; II. 158—in universities, XXI. 446,

Bridge, Edinburgh, VIII. 394 Forest of, VII. 689, X 680, 681coal-field in, XV 203.

Deane (Sir Anthony), his improvements on ships, XVI 98, 96; XX. 130.

Deaneries, VIII 743

Dearg (Lough), XIL 505 Death, XVII 702—signs of, from drowning, VIII. 181-from laughter, 192, n. 1-cases of apparent, XIV. 429of, 1b -medico-legal examination of a dead body, 1b -death from starvation. ib; from extremes of temperature, 431; wounds, ib, poisons, 432—by asphyxia, 430; XVII 703—by syncope, 702—by coma, ib -in the sense in which it was incurred by Adam, XXI 201

- black, pestilence in Greenland, XI 39.

Death's head moth, IX. 210-an enemy to bees, IV 585.

DEATH-WATCH, or Death-tick, VII 689; IX. 112.

Deaths, in England, in 1852, VIII 756annual, per cent, XV. 649-in Ireland, from 1841 to 1851, XII. 510-ratio of, in different countries and cities, XV. 650-dependence of births and marmages on the, XVIII 348-registration of, 831-Scotland, XIX. 800-Switzerland, XX 890

DEBATEABLE LAND, VII. 689, 578.
DEBENTURE, VII. 689—book, in book-keeping, V. 23.

Debreczyn, Hungarian city, VII. 689. Debruized, in heraldry, VII 689

Debt, imprisonment for, XIL 365-66, XVIII 574

NATIONAL, VII 689; VIII 751— funded and unfunded debt of the United Kingdom in 1854, 752—amount in each year since 1820, X. 342-managed by the Bank of England, XV. 473—Sir R Walpole's plan for lessening it, V. 456-Pitt's plan of a sinking fund, 518, VIII. 753-of Ireland, XII 526-Dr Hamilton on, XI. 201—debt of dif-ferent European States, IX. 398—of Spain, XX. 492—of the United States, XXI. 428.

Commissioners, payment of sav-ings-banks to, XIX. 657, accounts and returns of, to, 669.

Debtors, Roman law against, VI. 740, XIX 301-inhibition of, XIL 381.

DECADE, VII. 689. DECAGON, in geometry, VII. 689.

### DEC-DEC

DECALITRE, VIL 689; X. 284. DECALOGUE, VII. 689-the ten commandments not binding on Christians as commandments, L 469, but as they are in themselves moral duties, 1b

DECANDOLLE, VII. 689 See Candolle. Dе

DECANTATION, VII. 689. DECANUS, VII 689 Decapoda, crustacea, VII. 540

- tribe of mollusks, XV 398, 395,

DECAPOLIS, VII. 689

DECAPROTI, VIL 689. DECASTYLE, in architecture, VII. 689: III.

Decay, of building stones, XX, 712

Decazes, X. 179, 180 et seq Deccan, in Hindustan, VII 689, XI, 446,

December, VII. 615, XIX. 341. DECEMBER, VII. 690, VI 77—gardening calendar for, XI 761.

DECEMPEDA, ancient measure, VII 690 DECEMVIRI, Roman magistrates, VII. 690; XIX. 800

Decency, as an incentive to virtue, XV. 564

DECENNALIA, Roman festival, VII. 691. Decentius, VII 303

DECHALES (C F Millet), VIL 691. Dechenite, mineral, XV 106

DECIDUOUS, VIL 691, 698; V. 110. DECH, in astronomy, VII 691

DECIMAL ARITHMETIC, VIL 691-–ıntroduc⊶ tion of, I 551-fractions, III 599, telminate, 600, approximate, 601, inteiminate, 602

- COINAGE, VII. 691, XV 430 DECIMALS, circulating, VII. 691 DECIMATION, VII 691

Decipherer, or letter-opener's, department

in the post-office, XVIII 410
DECIPHERING, VII 691; VI. 728.
Decisions, in law, XIII 257. DECRUS, Roman emperor, VIL 691; XIX.

Mus, Roman consul, VII 691:

XIX. 304

DECK of a ship, VII 691, XX 189—flush-deck, VII 691—half deck, ib—sheer of, XX 180 Deckei (John), his work on anonymous

books, IV. 711. (Sir Mathew), on high duties, XXI.

(Von), on war, XXI 697.

DECLAMATION, VII. 691-dramatic, XXI. 172

DECLARATOR, in Scots law, VIL 692; XIX. 811 Declension, in grammar, VII. 692. See Inflection.

DECLINATION, VII 692-in astronomy, ib; IV. 2-table of the sun's, for every day of the year, 797-sun's, in nautical astronomy, XVI. 38—moon's, 37—of the compass, VII. 692, I. 990—of a plane or wall, in dialling, VII. 692, 783, 787.

DECLINATOR, instrument used in dialling, VII. 692.

DECOCTION, VII 692.

Decoits, Indian robbers, XI. 520, 521. DECOLLATION, VII 692

Decomposable and indecomposable bodies.

DECOMPOSITION, in chemistry, VII 692—influence of electricity in, VIII, 593 modes of preserving articles of food from, IX. 766—of pressures, in statics, XX. 542—of building stone, 712 electro-chemical, XXI. 682-of water, by voltaic electricity, 628

DECORATION, in architecture, VII. 692; V. 757-of the Athenian buildings, IV.

DÉCOUPLÉ, in heraldry, VII. 692.

Decoy, XX. 210, n.
Decrement, VII. 692—laws of, in crystallization, 553, 554, 555. DECREPITATION, VII. 692.

Decrepitude, XIV. 425.

### DEC-DEG

DECRETAL, VII. 692, VI. 189; XXL 449. DECUMATES AGRI. VII. 692.

DECUPLE, VII. 692. DECURIA, VII. 692.

DECURIO, Roman officer, VIL 692; III. 631.

DECUSSATION, in geometry, &c., VII. 692.
DEDICATION, VII 692
DEDITICH, VII 692, XIX. 307.
DEE, nver in Cheshine, VII. 692, 735;
VI 529—tidal bore on, XVI. 65—land reclaimed from, 83.

- river in Kirkcudbrightshire, XIII. 98, XIX, 790.

- river in Scotland, VII 692; XIX. experiments at, XVI 81.

—— (John), mathematician, VII 693 —on optical instruments, XVI 525 Deeds, falsification of, XIV 427-regis-

tration of, XVIII. 842 DEEG, in Hindustan, VII. 693-battle of, XI 505

DEEMSTERS, judges in the Isle of Man, and in Jersey, VII. 698—courts of, XIV. 245

DEER, VII. 693, XIV. 205-as food, IX. -dentition of, XVI 466, 467-fossil, XVII 170, 171—of Hindustan, XI. 455 —deer-hunting, XII 39, 40—of Java, 704—number of species, XVII 632—deer-stalking, XX. 212 See Rein-deer.

DEFAMATION, VIL 693 DEFAULT, in law, VIL 693. DEFECTION, VIL 693.

DEFEND, VII. 693.

DEFENDER of the Faith, VII. 694; VIII. 700

DEFENDERS, VII 694. Deferens, in astronomy, VII 694.

Deffand (Madame du), on the origin of our knowledge, I 72—her remark on Gibbon, X. 611, n. 1.

Defilade, in fortification, IX 800.

DEFINITION, in logic, VII 694, XIII. 595
—as analysed by German logicians, 595. -as making concepts distinct, ib hypothetical growth of, 596—different steps of, 597—division compared with, 598—the uses of predicables in, 599 logical foundation of, 600-rules for, ib, n-known before Socrates, XX. 398;

his fondness for, 399.

Definitive, VIL 694—definitives, in grammar, X. 749, 791

DEFLAGRATION, in chemistry, VII. 694 Deflagrator, XXI 626

Deflecting forces, in dynamics, VIII. 356

DEFLECTION of the rays of light, VIL 694

-of beams, XX 763. Defloration, signs of, XIV. 428.

DEFOE (Daniel), VII 694-his Review. XVI 183-on the fate of an impartial writer, 186, n.—his novels, XIX. 270— Robinson Crusoe said to be founded on the adventures of Alexander Selkirk, XX. 40, XIII. 13 -- woollen manufactures of Halifax mentioned by, XXI. 916

DEFOLIATION, VII. 698, V. 109-period of, in different places, 221.

Defontaine (Mons.), on the velocity of the Rhine, XII. 144

DEFORMITY, VII 698

Defrancia, fossil animals, XVII. 98. Defries's gas-meter, X, 423

DEGENERATION, VII. 698.

DEGERANDO (Marie Joseph), VII 699—on the Kantian schools of philosophy, I 200-1-his account of Gassendi, X. 434,

435 et seq.
Deglutation, XVII 659—of fishes, XII. 221-in serpents, XIX. 47. Dego, X. 100.

DEGRADATION, VII. 699-of a knight, VI. 623.

Degrading, in the university of Cambridge, XXI. 485.

DEGREE, VII. 700—of latitude and longitude, XIII. 685; X. 480

- in civil and canon law-in music,

VIL 700.

- academical, VII. 700; XXI. 447, 450, 458, 463, 472, 484, 490

### DEG-DEL

Degree, measurement of, on the earth's surface, VII. 700, 702, IX. 548 et seq, I 772, 836, 837, 858, 854. DIHISCENT, IN BOTANY, VII. 700; V. 135.

Dehwars, IV 642 DEIFICATION, VII. 700; III. 307.

DEINOCRATES, Macedonian architect, VII DEIOCES, founder of the Median empire,

VII 700.

Demornis, bird, XVII. 634. See Dinornis.

Denotherium. See Dinotherium. DEIOTARUS, VII 700.

DEIPNOSOPHISTS, VII. 700. IV. 159. II.

Deirodon, genus of serpents, teeth of, XVI. 431.

DEISCAL, ancient ceremony, VII. 700. DEISM, VII. 701. DEIST, VII. 701.

DEITY, VIL. 701. See God.

DEJANIRA, wife of Hercules, VII. 701. Dejean (Le Compte), his works on coleoptera, IX. 18

Dejoces, XIV. 421; XVII 434. Dekrungh, river, III 764 Delacroix, French painter, III. 719. DELAGOA BAY, in Africa, VII. 701.

Delahire's pump, XII 177. Delambre (J. Baptiste Joseph), VIL 701 -sketch of his life and scientific character, I 774, n. 1, 833, 836, 838—his measurement of a degree of latitude, 774, 836; and of the arc of the meridian of Paris, IX. 551-prize awarded to, I 837-on the astronomical ments of Ptolemy, III. 793; of Dominic Cassin, 803; and of Lalande, 806—on Lagrange, XIII. 157—his astronomical labours, III. 807—on the solar spots, IV 28—on dials, VII. 773 et seq—on the orbit of comets, 168—his table of the stations and retrogradations of the planets, IV 57—his analysis of Ptolemy's work on optics, XVI. 521
Delamere, lake and forest, VI 529

Delarive (Prof ), on electricity, VIII 542, 580, n. 1, 552, n.—on the electricity of the solar rays, 570—on caustic curves, XVI. 577, 578—his experiments in voltace electricity, XXI 628, 626, 631, 640—on the chemical effects of voltaic electricity, 628; therapeutic effects of, 635; law of the propagation of, 623, 624voltaic gilding and silver plating due to. 637

De la Rue. (See Rue, Warren de la.) Delaporte (T. L. de Castelnau), his entomological works, IX. 18.

Delaroche, French painter, III. 719; XVIL 85

on heat, XL 266, 273; L 954formula of the relation between the pressure and temperature of steam.

Delarue (M), his reflecting telescopes, XXI 128 See Rue (Warren de la). Delasone, his anatomical researches, IL 764-on cartilage, 831

Delator's hive, III 295
Delaval on electricity, VIII. 529.
Delavigne, poetry of, XVIII 117.
DELAWARE, state, VII. 703; XXI. 419

-colonization of, 433-wine of, 888

river and bay, VII. 704; XVI. 175; XVII. 395, 509, 510, 646—bridge over the river, I 876. – Indians, II. 680.

Delesse (M.), on igneous rocks, XV 138. Delessite, mineral, XV. 78 DELETERIOUS, VII 704.

Deleuze (M.), his work on animal magnetism, XX. 416, 425 et seg.
Delfico (Melchiore), VII 704

DELFT, VII 705-ware, 1b.; XVIII. 443.

Delgado, Cape, XV. 669.

DELHI, in Hindustan, VII. 706; XVI. 301; XI. 468, 479, 481—siege of in 1804, by Holkar, 505—city sacked by Nadir Shah, XI. 480—outbreak of the Sepoy mutny at, XVI 303—siege and capture of, 304, 305-king of, 305.

### DEL—DEM

Della, ancient festival, VII. 707 surname of Diana, VII 707. DELIACAL PROBLEM, VIL. 707 DELILLE (Jacques), poet, VII. 707 - (J), blind author, IV. 778. DELIQUESCENCE, VII 708.

DELIQUIUM, in chemistry, VII 708
DELIRIUM, VII 708—tremens, XIV. 530.
See Mental Diseases.

Delisle, his astronomical labours, III. 806 -his thermometer, IV 457 Dehtzsch (F), XVII. 533 Dehum, battle of, XX. 375.

Dellagana (Messrs), their method of stereotyping, XVIII. 551. DELLAMCOTTA, fortress in Hundustan, VII.

Delos, island, VII. 708-amphictyony of,

II 729. Delphax, genus of insects, IX. 169.
DELPHI, VII. 709—amphictyony of, IL. 727—oracle of, XVI. 698

DELPHIN edition of the classics, VIL 710; IV 711; XL 794.

Delphinapterus, genus of mammalia, XIV. 229

Delphinia, ancient feasts, VII. 710. Delphinia, in zoology, XIV 220. Delphinium, genus of plants, V. 180. Delphinorhynchus, genus of mammalia, XIV 221.

DELPHINUS, a constellation, VII. 710; IV.

genus of mammalia, XIV. 222. See Dolphin. Delphon, Greek village, VII. 710. Delta of Egypt, VII 710; VIII. 421-

towns in, 497. of the Danube, VII. 654—of the Mississippi, XV. 279; XVI. 86—Indus, XX 304—formation of deltas, XVI. 86,

XVII. 586; XV. 140, 141 —— steam-vessel, XX. 164, 668. DELTOID, VIL 710-muscle, III 38-leaf, V 91.

Deltoides, section of insects, IX. 216. Deluc. See Luc (De).

DELUGE, VII. 710-dates of deluges, VI. 677-Hindu traditions respecting the, XV. 761. See Antediluvians, Deucalion, Noah.

Delundung, in zoology, XIV 166. Delvauxine, mineral, XV 101 Delves (Joseph), his microscopic photographs, XIV. 801

DELVINO, Turkish village, VII 724. DEMADES, Athenian orator, VII 724. DEMBEA, lake of Abyssinia, VII. 724; II

Demembration, crime of, XIV 428 Dementia, VII 724, XIV. 529, 584, 426. Demorara, VII 724; XI 81. — river, XI 81

DEMESNE, or demain, VII 724 DEMETER, name of Ceres, VII. 724; VI. 387; I. 457—mystenes of, XV. 753
DEMETRIA, ancient festival, VII. 724 Demetrias, genus of insects, IX. 82 DEMETRIUS POLIORCETES, VII. 724; IV.

172, XIII. 775 king of Antioch, III. 273. I Soter, VII 724.

- II Nicator, VII 724. - Phalereus, VII. 724; IV. 172; XVII 518; XIX. 839.

a cynic philosopher, VII. 725. of Skepsis, on the site of Troy, XXI. 356, 358

DEMI, VII. 725-George, in fortification, 725—Quaver—Semiquaver, ib.
DEMI ATTICI, VII 725, IV. 193.
Demidoff mines of platina, XV. 236.

DEMIGODS, VII 725—reign of the demi-gods in Egypt, XV. 765. Demilune, in fortification, IX. 818. DEMISE, VIL 725. DEMIURGE, VII. 725; X. 687, 688, 689,

XIV. 299 DEMIURGUS, chief magistrate in ancient Greece, VII. 725.

DEMMIN, town of Prussia, VII. 725 DEMOCRACY, VIL 725; X. 733, 735totle on, III. 568—at Athens, IV. 193,

### DEM-DEN

207, 212-Plato's views of, XVII. 810, 811-Tocqueville on that of America,

DEMOCRITUS, VIL 725; X. 498-on the moon's spots, I 568-his atomic theory, III 308—said to have put out his eyes, IV 779—works on his doctrines, VII. 726-his knowledge of medicine, XX. 810.

DEMOGORGON, VII. 726

DEMOIVRE (Abraham), VII. 726-on the calculus of signs, II. 556, 561-on life assurance, XII. 397—on annuites, III. 220; XV 600—on equations, IX. 299, 306—on probability, XVIII 589.

DEMON, VII. 726., See Dæmon Demonology, III. 310 et seq -Sir Walter Scott's work on, XIX. 823. Demonomania, XIV 538

DEMONSTRATION, IN logic, VII. 726-Aristotle on, III. 554-evidence of, IX. 416. Demonstrative metaphysics, XIV. 603 DEMONTE, Italian town, VII. 726

De Morgan (Mr). See Morgan (Mr De) DEMOSTHENES, orator, VII 726—his exertions against Philip, XIII 765—oration of Hyperides against, XII 192

- lantern of, III 442, 462; IV. 164 Athenian commander, IV. 206
DEMOTIC characters, VII. 729, XI. 372 —system of writing, 369, 371, 429; VIII. 441—Dr Brugsch on, XI. 371, n 7,

377, n. 3, 430, 409, 431. See Enchonal, DEMOTICA, Turkish town, VII 729, DEMOTICA (Thomas), VII 729—on Etruria,

IX. 356, 361, 371. DEMSTER, or deemster, VII 734, 693. DEMULCENTS, in medicine, VII. 734. DEMURRAGE, IN commerce, VII 784. DEMURRER, IN law, VII. 784; VIII. 789. DEMY, VII. 784; XXI 456

DENAIN, French village, VII. 734.
DENARIUS, Roman com, VII. 734, 67; XV.
432; XVI. 383

Denary numerals, history of, III 579; L. 703.

DENBIGH, in Wales, VII. 734, 736 DENBIGHSHIRE, VII 735—grits of, XV. 197 -sandstones and flags, 198-population and value of property, VIII. 754

DENDERAH, in Egypt, VIL 736; VIII. 505 temple of, ib.; to whom dedicated, XI. 384 and n 11

DENDERMONDE, town in Belgium, VII. 736. Dendoor, remains of the temple of, XVL

Dendraspis, genus of reptiles, XIX 64. Dendrerpeton, fossil reptiles, XVII 136. Dendrites, formation of, VII. 550 DENDRITIC, VII 736

Dendrocolaptes, genus of birds, XVI 768. Dendrodonts, fossil fishes, odontology of, XVI. 413, 428. Dendrodus, genus of fossil fishes, XII. 337;

XVII. 124-tooth of, XVI 413. Dendroides, genus of insects, IX. 133. DENDROMETER, VII 736.

Dendrophagus, genus of insects, IX 143. Dendrophis, genus of serpents, XIX. 57. DENDROPHORIA, religious ceiemony, VII.

Dendropupa, fossil mollusks, XVII. 111.

DENEB, Arabian town, VII. 736 DENHAM (Sir John), VII. 736; XXI. 935—character of his poetry, XVIII. 122. - (Major), VI 752-on Fezzan, IX. 528-his visit to Mandara, XIV 261his discoveries in Africa, II. 210; X. 477-his notices of Bornou, V. 50, 51, 53.

Denholm Hill quarry, fossils of, XIX. 453. Denier, com, VII. 737, XVI. 386. Denina (C. Giovanni Maria), VII. 737 Denis (P S.), his analysis of the serum of blood, II 781

- on the Zaluski library, XIII, 426.

n. 2. (St), French town, VII 788. (Mons.), his classification of books, IV. 715 - his introduction to bibliography, 716.

(Madame), and Voltaire, XXI. 661.

#### DEN-DEO

Denison (E. B), on clocks and watches, VII 2, 11 et seq -his clock escapement, 11-his gravity escapement, 14-his lock, XIII 542-on locks, 535 et seq -his spring remontoire, VII. 21-his sundial, VIII 37.

Denison (Sir William), governor of Tas

mania, XXI. 32 DENIZEN, in law, VII 738. DENMAN (Thomas, Lord), VII. 738 DENMARE, VII 738; IX. 402-Royal Academy of Sciences, IL 66, VIL 347—colomes, II 708; VII 149; XI 39—army of, III 650—British operations against, in 1801, V. 500, 501; XVL 136, 137-seizure of fleet by the British, in 1807, V 602, 605; X. 148-united with Norway and Sweden under one sovereign, XVI 317—separation of Norway from, V 614, 615; XVI 318—corn im-ported into Britain from, VII 399, 400 Jews m, XII. 788—hbraries of, XIII. 428—couns of, XV 441, 448; XVI 389—colonies in Greenland, XI 39—connection with Iceland, XII 197—monarchy of, XV. 413—newspapers of, XVI 202 — postal system, XVIII 424 — Insurance Society of, XII 413—proportion of insane, XIV. 536—the Reformation in, XVIII. 827-modern literature

weights and measures, XXI 810-map of, VII. Plate See Danes, Danish. Dennet's rocket apparatus, XIII 445. DENNIS, or Dionysius, the Little. See Dionysius the Little

of, XIX. 691—navy, XX. 138—wars with Sweden, 845 et seq; V 530—

(George), his work on Etruria, IX.

(JOHN), critic, VIL 751-on Addison's Cato, VIII. 151.

Denny (Henry), his works on insects, IX.

Dennys (John), his work on angling, III 162.

DENOMINATOR, VII. 751; III. 597; II 492. Denon, on Cleopatra's Needles, II 472— on the ruins of Thebes, III. 435, and

the Egyptian pyramids, 436
DENSITY, VII 751—of the earth, I. 834 Cavendish's experiments on, 1b; VL 353—of the atmosphere, IV.178; XVIII 27, 52-instrument for measuring, III. 390-of metals, VI. 482-of saturated steam, XX. 568, 571

Dent, in Yorkshire, XXI. 956, 958

(Mr), on clocks and watches, VII.
7 et seq—his mercurial pendulum, ib his Royal Exchange clock, 19 Great Exhibition clock, ib—his spring remontoire, 21—electrical dial, 26—his self-acting electrical clock, 27—compensation balance, 31-prismatic balance, ib .- his improvements on the dipleidoscope, VIII. 37. DENTAL, VII 751.

—— tubes, XVII 653. Dentalina, fossil shells, XVII 94. Dentalium, genus of annelides, XL 296.

- genus of mollusks, XV 378. DENTATUS (Curius), VII. 751; XIX. 306. Dentex, genus of fishes, XII. 287—fossil,

Denticrura, section of insects, IX. 103. DENTIFEICE, VII. 751. DENTILS, VII. 751; III. 509.

Dentine, XVI. 407, 410.

Dentirostres, tribe of birds, XVI. 747.
Dentists, XIV. 464—ivory used by, XII. 664.

DENTITION, VII. 751-in man, III. 26-in the lower animals, 105, 106. See Odontology, Teeth.

D'ENTRECASTEAUX'S Channel, VII. 751; IV. 261.

- discoveries in Australasia, IV. 253. 258, 264.

Denudation, in geology, XV. 181. DENUNCIATION, VII. 751. DEOBSTRUENTS, in pharmacy, VII. 751.

DEODAND, VII. 751.
Deodar Cedar, V. 209; XVII. 760-timber, XXI. 278.

### DEO-DER

DEODHUR, town in Hindustan, VII. 752. Deodorizers, XIX. 621 Deodunga, highest known peak of the Himalayas, XVII 598, 643

Deohá, river in Oude, XVII 15 Deonella, in Hindustan, VII. 752 Deontology, XV. 536 and n. 2; I 300-medical, XIV. 464 - Bentham's work

on, I 300, 303. Deparcioux (M), on probabilities of life, III. 221; XII 398—his arcometer, III.

391—on overshot-wheels, XII 168—on mortality, XV 601, 632 Dependence, feeling of, XIV 620.

Dephlegmation, VII. 752 Dependention, VII. 752

Dependenticated, VII 752

air, VII 752 See Oxygen gas

Depilation, XIII 306

DEPILATORY, VII 752
Depolarization of light, I. 908, 909; XVI. 648—of heat, I. 957; XL 267. DEPONENT, in grammar and in law, VII.

752. DEPOSITION, VII. 752

Deposits, bank of, XV. 450-interest on, 451; none allowed by the Bank of England, 473-dangers incident to the system, 451-in Scotch banks, 484.

Depressa, section of msects, IX 104 DEPRESSION of the Pole, VII 752-of a star—of the visible horizon, ib.

DEPRIVATION, in law, VII 752. See Degradation

DEPTFORD, in Kent, VII. 752, XIII. 67-DEPUTATION, VII 752, AILL 61—dock and victualing yards of, VIII. 80.
DEPUTATION, VII 752.
DEPUTATION, VII 753—French Chamber of Deputates, X. 278

DERA GHAZEE KHAN, in Afghanistan, VII. 753.

- Ismail Khan, in Afghanistan, VII. 753

Derangement, Mental. See Mental Diseases

Derayeh, III. 348, 344—captured by the Turks, 366—destroyed by Ibraheem Pasha, VIII. 494.

Derbe, genus of insects, IX. 169. Derbend, or Derbent, Russian town, VII. 758—province, XIX. 551, 521.

DERBY, VIL 753—porcelain factory at XVIII, 437.

- (Earl of), king of Man, XIV. 248. (Earl 01), king or man, AIV. 248.

(Lord), prime minister, V. 672

Derryshure, VII. 753 — population and value of property, VIII. 754 — lace manufacture in, XIII. 148—caverns in, XI 71—its bricks, V. 348—upper carbonferous rocks of, XV. 203—lead mines of, 245; yield of, m 1854, 246. Dercetts, Syrian goddess, VII. 756; IV.

- genus of fossil fishes, XII 338 DEREHAM, EAST, in Norfolk, VIL 756; XVL 289.

DERELICITS, in civil law, VII. 756.

Derevaragh (Lough), XXI. 838—a kind of fish found in, 840

DERG (Lough), VII. 756; VIII. 104; XII. 505; VI. 753; XX. 92.

DERHAM (William), D.D., VII. 756—Lord Woodhouselee's edition of his Physico-

theology, XXI. 412

DERIVATIVE, in grammar, VII. 756. Dermatin, mineral, XV. 84 Dermestes, genus of insects, IX. 115; XXI, 549.

Dermestini, tribe of insects, IX. 115 Dermopteri, or dermopterous fishes, XII.

Dermot, king of Leinster, XII. 467. Deroot-esh-Shereef, VIII. 505. Derr, temple of, XVI. 349.

Derraigeh, III. 343. See Derayeh.
Derraigeh i III. 343. See Derayeh.
Derraigeh i III. 343. See Derayeh.
Derraigeh i III. 343. See Derayeh.
Derray See Londonderry. DERVIS, or Dervish, VII. 757; XV. 304.

See Fakir. DERWENT, river, Cumberland, VII. 757,

- Derbyshire, VII. 754.

### DER-DES

Derwent, Yorkshire, XXI 957. DERWENTWATER, VII 757, 578.

- Earl of, his rebellion, V. 454-his execution, 455

DESAGUILIERS (Jean Theophile), D D, VII 757-his contributions to electricity, I 733 - his theory of evaporation, IX. 407-his account of Newcomen, Cawley, and Beighton's improvements on the steam-engine, XX. 575 - steamboiler figured by, 586

Desains on the polarization of heat, XVI

DESAIX DE VORGOUX (L C. Antoine), VII. 757; X 102—in Egypt, VIII 488, V 574—his death at Marengo, X 119.

DESAULT (Pierre Joseph), VII 757—his connection with Bichat, IV 717—his surgical improvements, XX, 818.

DESCANT, in music, VII. 758. DESCARTES, VII 758 See Cartes, Des. DESCENSION, in astronomy, VII 758
DESCENT, VII. 758—of dignities—of gene-

alogy, ib Deschamps (Bernard), his work on the

wings of Lepidoptera, IX. 18 Descloiseaux (M.), on biaxal crystals, XVI. 654, 655.

Descloizite, mineral, XV 106.

Description, historical, XI 547.

DESERT, VII. 758; XVII. 614—of Egypt,
VIII 423, 514, 515—of Gobi, III 732—
botanical region, V. 228; XVII 628 See Sahara.

Desertas, islands near Madeira, XIII 799 Desertion, as a ground of divorce, XII. 54-of sailors, during war, XIII 288

Desèze, X. 74, 75 DESHACHE, in heraldry, VII 758. Desiccation, seasoning timber by, XX. 169, 170

DESIDERATUM, VII. 758. Desideri, his geographical discoveries in Asia, III 754.

Desiderius, king of the Longobards, XII.

643 DESIGN, VII. 758-in manufactories-in

painting—in music, ib —in architec-ture, III. 509, 492—argument for the existence of God from, XXI 187.— schools of, VII. 758, XXI 828— in Eduburgh, VIII. 896—in Belgium,

IV. 622

DESIGNATION, VII 758. DESIGNATOR, VII 758

Desirade, island, XI. 72. Desires, XIV. 579, XIX. 112, 116. Deslongchamps (Eudes), on asterias, XXI.

Desmarest on the mammalia, XIV. 130on birds, XVI, 730.

Desmartis (Telephe), his work on entomology, IX. 24.

Desmidaceæ, different views as to their nature, III. 206, n. 2. Desmideæ, plants, V. 218. Desmine, mineral, XV. 76.

Desmodus, skull and teeth of, XVI. 452. Desmond, Irish family, XII. 473; XIII. 72, 75; XV. 686—rebellion and defeat of, XIL 477.

Desmoulins (A.), his division of the indigenous Americans, IL 676. - (CAMILLE BENÖIT), VII. 759, 651;

X. 71—his execution, 85—extract from his Vieux Cordeliers, 86, n.

DESNA, Russian river, VII 759; XIX. 515. Desolation (island of), IV. 268, XIII 71. Desor (M), his arrangement of echinides, XXI, 991.

Desormes (M), on evaporation, IX. 408. Despard (Colonel), executed for high treason, V. 592

Despencer (Hugh le), VIII. 681. DESPOT, VII 759.

DESPOTICAL, VII. 759.

Despoissm, X 783—in Asia, III 750; Bur-mah, V. 780, Dahomey, VII. 620, Per-sia, XVII. 426; Siam, XX. 288—in Sweden, 857.

Despoto-Dagh, mountain, XXI 376. Despoulles, in heraldry, VII 759. Despreadx, VII. 759. See Boleau.

### DES-DEV

Despretz on the power of conducting heat in different bodies, XI 261

Dessaignes on the phosphorescent effects of electricity, VIII. 598 Dessaix. See Desaix.

Dessalines, governor of Haytı, XI 257. Dessau, German city, VII. 759.

DESSERT, VII 759 DESTINY, VII 759 Destouches (M), comedy by, L 250, and n Destructiveness, XVII 562. DESULTOR, VII. 759.

Desvauxiaceæ, nat order of plants, V 215 Detail, in architecture, III 509

Deterioration of domesticated animals.

DETERMINATE problem, VII 760.

SECTION, VII 760.

DETERMINATION, in mechanics, VII 760— in logic, XIII 572.

Determinatives, in Egyptian language, XI 419, 420, 423, 424 DETINUE, in law, VII 760

DETMOLD, German city, VII 760. DETONATION, IN Chemistry, VII. 760. DETRANCHE, in heraldry, VII. 760. DETRITUS, VII 760

DETROIT, in United States, VII 760, XIV.

- Fort, taken by the British in 1814,

V 616 river, VI. 137 Detrusion, I 875. Dettmgen, battle of, V. 459 DEUCALEDONIUS OCEANUS, VII 760 DEUCALION, VII 760, 710, 712 DEUNK, Roman weight, VII. 761
DEUTEROCANONICAL, VII 761
DEUTEROCANONICAL, VII 761
DEUTEROPOTMI, VII. 761, XVII 400, 402.
DEUTEROPOTMI, VII. 761.

DEUTEROSIS, VII 761. Deutz, an adventurer, X. 207. DEUX PONTS, VII. 761.

DEVA, VII 761.

DEVAPRAYAGA, in Hindustan, VII. 761. Devario, genus of fishes, XII 257 Development, construction of maps by, X.

492, 488 Devenish island, IX, 514 DEVENTER, town in Holland, VII 761. DEVEREUX (Robert), earl of Essex, VII.

761; VIII. 713, 714
Deversors, XII 121
Devastions in the course of projectiles,

XI. 116, 127.

DEVICE, in heraldry, VII. 762—devices on coms, XVI 354, 381.

DEVICOTTA, town in India, VII 762. DEVIL, VII. 762—Bougeant's notion that beasts are animated by devils, V 700, 701—Luther's altercations with, III. 312-notion of, by the Scandinavians, XV. 767. See Dæmon, Dæmoniac, Demonology, Satan, Witch.
Devil's Bridge, in Wales, VI. 233.
Deville (Mr), his collection of skulls,

XVII. 563.

Devilers (M), his works on insects, IX 21
DEVINCTIO, VII 762.
DLVISE, in law, VII. 762.
DEVIZES, in Wiltshire, VII. 762; XXI.

879.

Devonian period, in geology, XV. 199—fishes of, XII. 348, 349, 350, 351; XVII. 117 et seq., 640—mollusca of, XV. 403, XVII. 103—corals, 96—rocks in Germany, X. 584, in New York, XVI 215—in Orkney, 719—ichthyodorulites of, XVII. 117 - fossils, 98 et seq.—in Russia, XIX. 517—rocks in Scotland, 791, 793—in Spain, XX. 485.

DEVONPORT, VIL 762; XVIII 20 DEVONSHIRE, VII. 762—cattle of, II. 341 EVONSHIRE, VII. 762—cattle of, II. 341—small field enclosures in, 269, n.—population and value of property, VIII. 754—rocks of, XV. 199, 201, 204—irrigation in, XII. 614—arsenic from, XV. 246—fisheries, IX. 643, 643, 649—pauperism in, XVIII 304, n. 3—woollen manufactures, XXI 914.

#### DEV—DIA

Devonshire, Duke of See Cavendish (Wm.) DEVOTION, VII. 764—a principal feature in the character of chivalry, VI 603 DEW, VII 765; XIV. 653—dew-point, IX. 411; XIV. 653, VI. 464—in Forfarshire, IX. 782-at Funchal, IV 184-Dalton's experiment on the dewpoint, L. 934 - dew-point hygrometer, 935-Dr Wells on, 954, VII 770, XI 265; XIV. 653 - dew-retting of hemp and flax; see these articles. See Evaporation

DEWAS, town in Hindustan, VII 770. Deweylite, mineral, XV 80. De Winter (Admiral), his engagement

with the British fleet at Camperdown, V. 561; VIII 258, X 107
DE WITT (John), VII 770, V. 428—on life-annuities, III. 220—his intimacy with Sir William Temple, XXI. 149. Dewrance (John), his improvement of

steam-engine valves, XX 586
DEWSBURY, in Yorkshire, VII. 771; XXI.

Dexia, genus of insects, IX. 249. Dexiphanes, architect, II 469. DEXTANS, Roman weight, VII. 771 DEXTER, In heraldry, VII. 771
DEXTRINE, VII. 771; V 320; IX. 756;
II 380; VIII 48—optical properties of, XVL 539, 681 - mode of procuring 681. n 1

DEXTROCHERE, in heraldry, VIL 771. DEY of Algiers, VII 771.
DEYNSE, town of Belgium, VII. 771.
DEYRAH, town in Hindustan, VII 771. Dezima, island, XV 770 DEZPHOUL, Persian town, VII. 771. DHAR, in Hindustan, VII. 771 Dhawalagiri, one of the Himalayas, XI.

DHARWAR, in Hindustan, VIL 771 Dhenwars of Nepaul, XVI 144 Dheras, class of people in Gujerat, XI

Dhoolpoor, in Hindustan, VII. 771. Dhourra. See Duria. Dhuns, among the Himalayas, XI. 438 Diabase rock, XV. 135.

DIABETES, VIL 772; XVII, 666—in cattle, XXL 570 - Dr Rollo's treatment of,

VIII 24. DIACAUSTIC CURVE, VII. 772. DIACHYLON, in pharmacy, VII. 772

Diaclasite, mineral, XV. 82. Diaconus (Paulus), on the Lombards, XIII. 638, 639, 643.

Diacope, genus of fishes, XII 276
Diacoustics, VII. 772 See Acoustics Diacri, Athenian faction, VII. 772. 

Diademæ, fossil echnoidea, XVII 100. Diadochite, mineral, XV. 101 DIERESIS, in grammar, VII 772 DIETETE, Athenian arbitrators, VII. 772. Diagnosis, in medicine, VII 772.

DIAGONAL, in geometry, VII. 772; X. 508—diagonals, in ship-building, XX. 185-diagonal trussing, 181, 191.

DIAGORAS, VII 772 DIAGRAM, in geometry, VII 772 Diagramma, genus of fishes, XIL 285,

DIAL, VIL 772—equinoctral, 777, 779honzontal, ib, 781 — vertical, 782— polar, 783—inclining, 788 — Lambert's, 792-ring, 794-universal mechanical. 796-principal writers on, 776-invention of, ascribed to Anaximander and Anaximenes, III 787—dials of clocks, VII. 3, 23—electrical, 26. See Dialling.

DIALECT. VII. 772. DIALECTICS, VII. 772-Aristotle on. III.

550—of Plate, XVII 794—definition and induction known before Socrates, XX 398, and much employed by him 399 See Logic.

Diallage, mmeral, XV. 82-rock, 135. DIALLING, VII 772—general principles of, 776. See Dial.

Diallogite, mineral, XV. 100.

#### DIA—DIB

DIALOGISM, in rhetoric, VII 799 DIALOGUE, VII. 799—dialogues of ancient philosophers, III. 550-of Plato, XVII. 792, 814

DIALYSIS, in grammar, VII. 800 Dialytia, genus of msects, IX. 250,
Dialytic telescopes, XXI. 122, 123,
Diamagnetism, its discovery, I. 980,
XIV 16, 30—diamagnetic bodies, I. 980 —discussion on the nature of, ib.

DIAMASTIGOSIS, VII 800. DIAMETER, VII. 800; X. 513, 540-in ar-

chitecture, III, 509 DIAMOND, VIII. 1; VI. 471; X. 447; XV 123-conjectured by Newton to be inflammable, I. 666—specific gravity, XII
88—its doubly refracting and polarizing structure, XIV. 725—glazier's,
VIII. 5; X. 671—cutting of, VIII 813
—distribution of the, XVII. 623—diamond mines of Bundelcund, V. 762lenses of, XIV 766—structure, XVL 541—diamond mines of Biazil, V 284. 285, 293, 298-diamond-cutters at Amsterdam, XI 583-in Para, XVII 266in Hindustan, XI. 458—diamond powder, XIII. 231—Bristol diamonds, V. 371— Cornish, VIL 408—exports of, from Rio de Janeiro, XIX. 175—of Sumbulpore, XX. 807.

Cape, VI. 133. - Cape, VI. 188. - in heraldry, VIII 5 - harbour and island, VIII. 5. Point, in Sumatra, XX. 803. type, XXL 402, 403. DIAMPER, town in Hindustan, VIII. 5. DIAMA, goddess, VIII. 5—her temple at Ephesus, IX. 267; the object wor-shipped there probably an aerolite, L

458.

DIANÆ ARBOR, the arborescent form of silver, VIII 6. DIANDRIA, in botany, VIII 6; V. 177. Diano, town of Naples, VIII 6.
Diapason, in music, VIII 6 Diapensiaceæ, nat order of plants, V 200 DIAPENTE, in ancient music, VIII 6
DIAPER, VIII. 6—manufacture of, at
Dunfermline, 259, IX. 545—origin of
the name, XXL 966. Diaperales, tribe of insects, IX, 131. Diapering, in heraldry, XI. 330

Diaperis, genus of insects, IX. 131. DIAPHANOUS, VIII. 6.
DIAPHONICS, VIII. 6. DIAPHORESIS, in rhetoric, VIII. 6
DIAPHORETICS, VIII 6—for the domestic animals, XXI 556 and n. 4.

Diaphorus, genus of insects, IX. 243 Diaphragm, VIII. 6; III 39—effects of electricity on, VIII 602—its action in

breathing, XVIII 75. DIARBEKIR, in Asiatic Turkey, VIII. 6. Diarrhœa, in animals, XXI 568 Diarthrosis, in anatomy, VIII 7.

DIARY, VIII 7. Dias de Sohs (Juan), XVII 779. DIASCHISMA, in music, VIII. 7.

Diasia, Athenian festival, VIII, 7. Diaspore, mineral, XV. 86 Diastaltic actions, in pathology, XVII 700

DIASTASE, VIII. 77, 48; V. 320; IX. 757; Diastata, genus of insects, IX. 265.

DIASTEMA, VIII 7. DIASTOLE, VIII. 7. – ın grammar, VIII 7

DIASTYLE, VIII. 7; III. 509 DIASYRMUS, in rhetoric, VIII 7. DIATESSARON, in music, VIII 7. DIATHERMOUS, VIII. 7. DIATHESIS, VIII 7.

Diatomaceæ, sub-order of algre, V. 218, 147-different views as to their nature, III. 206, n. 2-in volcanic mud, XXI.

Diatomeæ, plants, V. 218 DIATONIO, in music, VIII. 7; XV. 706. DIAZ (Bartolomeo), VIII. 7; X. 89°, 712. Diazona, genus of mollusks, XV. 332, 330. DIBBLE, VIII. 7.

### DIB-DID

7-his catalogue of books of the fifteenth century, IV 708—on editions of the classics, 711—on works printed by Gutenberg, XVIII. 529—on the sale of the Roxburgh library, 532 Dibolia, genus of insects, IX. 150

Dibranchiata, order of mollusks, XV. 394
—fossil, XVII. 113.

DICEARCHUS, VIII. 7; X. 467. Dicæum, genus of birds, XVI 769. Dicastes, Athenian judge or juror, VIII.

DICE, VIII. 7-dice-box, V 252 Diceras, extinct genus of mollusks, XV. 349; XVII. 107.

Dichæta, genus of insects, IX. 255. Dichalcum, com, VII. 67. Dichobune, fossil mammals, XVII 164

Dichodon, fossil mammals, XVII. 164— teeth of, XVI 465, 466, 468 Dichotomy, VIII. 8—division by, in logic,

Dichroism, XV 58, XVI 666; I 915 Dichroite, mineral, XV 88. Dick (David), his centrolinead, XVII.

Dick's educational bequest, XV. 577
Dickens (Charles), XIX. 283—imitated by

Freytag, 293. DICKER, VIII 8.

XXXX 598

DICKINSON (Edmund), VIII. 8. (Mr), on the collieries of Lanca-shire, &c, XIII. 179.

Dickoié (W.), his work on insects, IX. 23. Dichnous plants, V 178, 179

DICOTYLEDONOUS plants, VIII. 8; V 76, 141, 179—stem of, 80—germination of, 186-course of the sap in a dicotyledonous tree, 111-number known, 224arrangement and characters of, 180number of fossil species, 238-number described, XVII. 626.

described, AVII. 626.
Dicctylichthys, genus of fishes, XII. 314.
Dictania, genus of insects, IX. 126.
Dictanoura, genus of insects, IX. 214.
Dictanov, VIII 8; XIX. 300 et seq.
Dictaco, VIII 8; XIX. 300 et seq.
Dictac, genus of fossil fishes, XII. 342 Diction, poetic, XVIII 94 See Composition, Style

DICTIONARY, VIII. 9—of the English lan-guage, 1b—list of dictionaries, ancient and modern, 13—Dr Johnson's, XII. 796, 797-early dictionaries, XVII 523 -prospectus of a Faroese, IV. 397-Suidas's, XX. 801-bibliographical dictionaries, IV 713.

Dictum, in syllogisms, XIII. 609. Dictunia, ancient festival, VIII. 14. Dictyogenæ, sub-class of plants, V. 178, 210

Dictyoptera, genus of insects, IX. 107. Dictyosoma, genus of fishes, XII. 310. DICTYS CRETENSIS, VIII 14.
Dicynodon, fossil reptile, XVII 143—

teeth of, XVI. 486. Dicynodontia, order of fossil reptiles, XVII. 143.

DIDACTIC, VIII. 14.

Didelphidæ, fossil, XVII 638 Didelphis, genus of mammaha, XIV 174 -dentation of, XVI. 448-D. Gypsorum, XVII 165. Didemnium, genus of mollusks, XV. 332.

DIDEROT (Denis), VIII. 14-on ideas, I 109, 110—on liberty and necessity, 150—his atheism, 181, 274—his intimacy with Catherine II of Russia, VI 337 his theory of beauty, IV. 539—on the blind, 778, 780—on the deaf and blind, VII 688-his romances, XIX. 288.

Didier, Lombard king, X. 8. (Paul), French insurgent, X. 176. (St), French city, VIII 16.
Didion, on gunnery, XI. 105, 116 et seq.

Didius Julianus, XIX. 346. Dido, VIII. 16; VI. 280. DIDRACHMA, ancient coin, VIII. 16; VII.

Didrimite, mineral, XV. 78. Diduction, muscles by which it is effected, III. 40.

#### DID—DIG

DIDYMUS, ancient grammarian, VIII. 16.
—— of Alexandria, VIII 16. DIDYNAMIA, in botany, VIII 16; V. 177. DIE, for coming, VIII 16-method of making, VII 94-probable cause of it adhering to the coin, XX. 753. town in Flance, VIII 16.

(St), two French towns so named, VIII. 16. Diebitsch (Count), III. 648, XIX. 496;

XXI. 374. DIEBURG, German town, VIII 16 Diego Garcia, island, XIV. 364 DIEWERBROEK (Isbiand van), VIII, 16. DIEPPE, French town, VIII. 16. DIES MARCHLE, VIII. 17.

DIESIS, in music, VIII. 17 DIESPITER, VIII 17.

DIEST, town of Belgium, VIII 17 DIET, VIII. 17—in law, 1b—Polish, XVIII.

145, 146 et seq - Swedish, XX 865
DIETETICS, VIII 17; XIV. 463—principles of, IX 768—fish, III 93, 94—nutritive qualities of different kinds of food, 179-abstinence least supportable by the young, 180-cases of abstinence, 1b—effects of too luxurious diet on Luther, 312, n 1—diet of the Arabs, 853—of the Chinese, VI. 589, 594—its influence on the health, XIV. 440 See Cookery, Food, Nutration

DIEU ET MON DROIT, VIII. 26, XI. 338. DIFF, musical instrument, VIII 26 DIFFARREATIO, VIII. 26; VII 239 DIFFERENCE, in heraldry, VIII. 26; XL

in mathematics and logic, VIII.

26; XIII. 572.

DIFFERENTIAL, VIII 26—distinction between differentials and variations, L. 716. See Fluxions

- CALCULUS, VIII 26; VL 68, IX. 679. See Fluxions.

- EQUATION, VIII 26 THERMOMETER, VIII. 26, VII 103; XI 268; XII. 187, XIII. 344, 345—invention of, I. 764, 944.

Diffiugia, genus of zoophytes, XXI. 1007. DIFFORM, VIII. 26.

Diffraction of light, I. 896, 903; VI. 651; XVI. 544, 546, 605 — negative, 609, diffraction-bands, L 897

DIFFUSION, VIII 26 — of gases, 1b — of heat, XI 261—of metals into vapour by electricity, VIII. 589.

DIGAMMA, VIII 26

774.

DIGHY (Srr Edward), a confederate in the Gunpowder Plot, V. 385

(Sir Kenelme), VIII 27—his account of his son's blind preceptor, IV.

781.

Digenite, mineral, XV. 118. DIGENTIA, now Licenza, river, VIII. 27. DIGEST of Roman laws, VIII 27. DIGESTER, VIII. 27-Papin's, I. 770; XXI.

DIGESTION of food, VIII. 27; IX 768; VI. 520; XVII. 658, 660; XXI. 565—in reptiles, III. 109; XIX. 14, 47—peculiar to animals, III 170—Luther's visions the effect of derangement of, 302, n 1—comparative digestibility of different aliments, VIII 21—Dr Beaumont's experiments on, IX 768; XVIL 659-Spallanzani's experiments on, XX. 497—diseases of the digestive organs in the domestic animals, XXI 563 organs of, in man, III 3, 59; brutes, 105—the crustacea, VII. 538; insects, IX. 50; fishes, XII. 222; mollusca, XV. 868; buds, XVI. 734, 784, zoophytes, XXI, 973.

- in chemistry, VIII. 27. Digger, V. 731 - gold-diggers, IV. 276,

Digges (Cape), XVIII 168

(Sh Dudley), V. 390—his defence of the East India Company, XVIII.

(LEONARD), VIII. 27-on Archimedes' burning glasses, VI. 5—the alleged inventor of the telescope, XVI.

#### DIG-DIN

DIGGES (THOMAS), VIII. 27-on his father's invention of the telescope, XVI. 524,

Dreene, in minung, VIII. 27—"duggings," in California, II. 706; VI. 97; Australia, IV 277, 295. Dierr, VIII. 27; III. 583.

Digital numeration, IL 8 Digitalia, alkaloid, XIV 439

DIGITALIS, genus of plants, VIII 27; V. 202-poisonous properties, XIV 439, XVIII. 131. See Fox-glove

Digitigrada, in zoology, XIV 156; XVII.

DIGLYPH, in architecture, VIII. 27. Digne, French town, VIII 27. DIGNITARY, VIII. 27. DIGNITY, VIII. 27—in character, 28 Dihong, river in Assam, III. 762 Dihydrite, mineral, XV. 103. Dn, VIII. 28

DHAMBUS, in poetry, VIII. 28; IX. 770 DHPOLEIA, ancient festival, VIII. 29; V.

DIJON, French town, VIII. 28; VII. 426.
DIXER, goddess, VIII 29.

or Dyke, VIII. 29—in collieries,
VII. 117—in rocks, XV. 165, 171, 187, XVIL 621-dykes of trap, XV 189; of lava, 191-dykes in Holland, XI 581, in volcanic cones, XXL 604.

DILAPIDATION, in law, VIII. 29. Dilatability, a property of all bodies, XX.

DILATATION, VIII 29—theory of the descent of glaciers, X. 638—of the air by heat, XIV 647—increased by a small addition of force in a body much dilated, XX. 752

Dilator, or Speculum, XX 811 n
DILEMMA, in logic, VIII. 29, XIII 634
DILETTANTE, VIII. 29.
DILIGENCE, VIII. 29

DILL, a plant, VIII. 29; XI. 745; V 114. DILLENBURG, in Nassau, VIII. 29 DILLENGEN, in Bavaria, VIII. 30 Dilleniaceæ, nat order of plants, V. 180. DILLENIUS (John James), VIII 29.

Dillwyn (William), his opposition to the slave-trade, XX. 321

Dilophus, genus of insects, IX 280.
DILUTIAL, VIII. 30.
DILUTIAL, VIII. 722.

DIMACHÆ, ancient soldiers, VIII 30. DIMENSION, in geometry, VIII. 30 Dimeracanthus, genus of fossil fishes, XVII. 117.

Dimidiation of arms, XI, 339. DIMINUTION, VIII. 30. DIMINUTIVE, in grammar, VIII. 30. DIMISSORY LETTER, VIII. 30 Dimitri Ivanovitch, XIX. 472

DIMITY, a kind of cotton cloth, VIII. 30 of Dacca, VII. 614-India, XI. 459manufacture of, confined to the north of England, VII. 449.

Dimorphine, mineral, XV. 122. Dimorphism in minerals, XV. 62. Dimorphodon, fossil reptiles, XVII. 151. DIMSDALE (Thomas), VIII 30. DINAGRPORE, town in Hindustan, VIII.

DINAN, French town, VIII. 31. DINANT, Belgian town, VIII 31 DINAPOOR, in Hindustan, VIII. 31—sepoy insurrection at, XVI. 310. DINARIO ALPS, VIII. 31; II. 624. DINDIGUL, in Southern India, VIII. 31. DINDING, island, VIII. 31.

DINDYMENE, VIII 31. Dinettus, genus of insects, IX. 195.
Dingain, Natal chief, XV. 803, 804.
DixGra, town in Ireland, VIII. 31.

Devonian beds, XV. 200.

DINGWALL, in Ross-shire, VIII. 31; XIX. 427—vitrified fort near, IX. 791. DINKELSBUHL, in Bavaria, VIII. 31

DINNER, VIII. 82. Dinocrates, architect of Alexandria, II.

Dinornis, fossil birds, XVII. 155 Dinesauria, fossil reptiles, XVII. 150-

### DIN-DIO

teeth of, XVI. 433-geological distribution of, XVII 154.

Dinostratus, geometer, X. 499—on the squaring of the circle, XX. 521 DINOTHERIUM, VIII 32; XVIL 167, 639dentition of, XVI. 472

Dinwiddie (Governor), XXI 743, 744, 746 Dio of Syracuse, apparition seen by, III.

Diobolum, Grecian coin, VII 67.
Diocese, VIII. 32, 743—Irish dioceses,
XII. 530—exarch of a, IX. 427. See

Diocleia, ancient festival, VIII. 32 Diocles of Carystus, II 750, XX 811.

geometer, X. 502—Cissoid of, 544 DIOCLETIANUS (C V. Jovius), Roman emperor, VIII 32-his palace at Spalatro, II 126; III 470, XX 494—baths of, IV 505—era of, VI 672—Egypt under, VIII 478—reign of, XIX 349

Dioctria, genus of insects, IX. 234 DIODATI (GIOVANNI), VIII 32—his French Bible, IV. 701

Diodatus, his blindness, IV. 779 Dioderma, genus of insects, IX 142. bloden, genus of fishes, XII 312, 314—
fossil, 338—poisonous species, XIV. 439
—teeth of, XVI 425, 426.

genus of mammalia, XIV 230 Diodontidæ, family of fishes, XIL 312,

Diodontini, sub-family of fishes, XII 314.
Diodorus Siculus, VIII 32—on the
Amazons, II 651—on Egyptian agriculture, 248-on the Druids, VIII. 185 et -on Egyptian architecture, III 435 on Egyptian writing, XI 377-on the Egyptian judgment on the dead, X. 343 rtions of his works recovered,

XVII. 213—on Babylon, XIX. 846
Directions plants, V 126, 176, 177.
Diogenes, of Apollonia, VIII 32, II. 749.
the Cynic, VIII 33; VII. 608.

LAERTIUS, VIII. 83—Casaubon's edition of, XIX. 827.

Diomedea, genus of birds, XVI. 812 DIOMEDES, VIII. 33—character of, XVIII. 101

DION CASSIUS COCCEIANUS, historian, VIII 34-fragments of his History discovered, XVII. 213.

- Chrysostom, VIII. 34. - of Syracuse, VIII. 34; XVII. 788, 789, 790-Dionysius dethroned by, XX. 900

Dionis (Pierre), French surgeon, VIII. 34; II 761; XX. 818. Dionix, genus of insects, IX. 153.

Dionusus, VII. 712, 716.
Dionusus, ancient festivals, VIII. 34; IV. 347, 348

Dionysiacs of Ionia, III 401. Dionysian period, VI 81. Dionysius the Elder, VIII 34; XVII 788; XX. 899—his war with the Cartha-

ginians, VI 282.
the Younger, VIII. 35, XVII. 789; XX. 899.

the Areopagite, VIII 35, XV. 755 of Halicarnassus, VIII. 35—portions of his works recovered, XVII. 213—on the Pelasgi, 371-notice of the works of. VI. 739.

- Exiguus, or the Little, his collection of canons and decretals, VI 188, 189-the Christian era first employed ъу, 667.

- Periegetes, VIII 35; X. 468 DIONYSUS, or Bacchus, VIII 35—mysteries of, XV 753 See Bacchus.

DIOPHANTINE PROBLEMS, in mathematics. VIIL 35.

DIOPHANTUS, VIII. 35-work of, I. 441 his system, 707—on algebra, II. 483—translations of his work, ib—his algebraical knowledge compared with that of the Hindus, 487. Diopside, mineral, XV. 81.

DIOPTASE, mineral, VIII. 85; XV. 102. Dioptes, or Dioptes, VIII. 36.-Dioptete lights, XIII 471, 474. micrometers, XIV. 748.

### DIO-DIR

DIOPTRICS, VIII 36; XIII 451; XVI 556 -Descartes on, VI. 279; XVI 531

DIORAMA, VIII 36. Diorite, XV. 135; XXI 606—soils from, II 391 See Greenstone.

Dioscoriaceæ, nat order of plants, V. 210 Dioscorides, physician, VIII. 36—on salammoniac, II 720.

DIOSCUEI, Castor and Pollux, VIII. 36 DIOSCUEIA, ancient festivals, VIII 36 Dioscurians, in ethnology, IX. 346—language of, XIII 215

Diospolis Magna, or Thebes, in Egypt, VIII 506 See Thebes
DIOTA, ancient wine-vessel, VIII 36; IL

Diotime, XX 374

Dip of the horizon, X 480-of the magnetic needle, I. 990 n 3, 991; XIV 2, 57. See Needle

of beds in geology, XV 168 of lodes in mining, XV. 220 working, in collieries, VII. 125 Diphanite, mineral, XV 79 DIPUTHONG, in grammar, VIII 36-shorthand writing, XX. 676

Diphucephala, genus of insects, IX. 125. Diphyidæ, zoophytes, XXI 1001 Diphyodont mammals, XVI 478 Diphyozooids, zoophytes, XXI 1006. Diplacanthus, genus of fossil fishes, XII

334; XVII 123. DIPLEIDOSCOPE, VIII 37 Diploctenium, fossil corals, XVII 97 Diplodonta, fossil mollusks, XVII 107 . Diploe, IL 825; III 19, 20 Diplograpsus, graptolites, XVII. 96 Diploite, mineral, XV 71. DIPLOMA, VIII. 38, 41—examination for,

VIL 144 DIPLOMACY, VIII. 38.

Diplomatic establishment of the United States, XXL 430.

DIPLOMATICS, VIII. 41. Diploprion, genus of fishes, XII. 275. Diploptera, family of insects, IX. 196. Diplopterus, genus of fishes, XIL 253fossil, 335; XVII 123, 125

Diplostoma, genus of mammalia, XIV 185 Diplostomum, genus of entozoa, XXI 980 Diplozoon, genus of entozoa, XXI 980. Dipoenus, sculptor, XIX. 853. DIPPEL'S OIL, VIII 42

DIPPING, in mining, VIII 42. DIPPING-NEEDLE, VIII 42, XIV. 82, 85, XVI 4—Coloumb on, VII. 464. Dipriacanthus, fossil fishes, XVII 117

Diprotodon, fossil mammal, XVII 174, 175, 638—teeth of, XVI. 449 Dipsacaceæ, nat. order of plants, V. 196. DIPSAS, serpent, VIII. 48; XIX. 58. Dipsomania, XIV 533.

DIPTERA, order of insects, VIII. 43; IX. 26, 221,

Dipteral See Dipteros. Dipteraceæ, nat. order of plants, V. 185. Dipterodon, genus of fishes, XII. 302. Dipteridæ, fossil fishes, XVII. 123. Dipterocarpaceæ, nat. order of plants, V

185. DIPTEROS, in architecture, VIII. 43; III.

Dipterus, genus of fossil fishes, XII. 334; XVIL 123 Dipterygonotus, genus of fishes, XII. 288.

DIPTOTE, in grammar, VIII. 43 DIPTYCHA, VIII 43-sacred diptycha, ib. Dipus, genus of mammalia, XIV. 184. Dipyr, mineral, XV. 73

Dinz, in mythology, VIII. 43 See Furies. Dircæa, genus of insects, IX. 132. Direct, in arithmetic, VIII. 43 Direct-action horizontal steam-engines,

XX. 608—vertical, 610. DIRECTION, VIII. 43. DIRGE, VIII 43. DIRIBITORES, VIII, 43. DIRIGENT, in geometry, VIII. 43.

Dirleton, farming in the parish of, II.

Dirom, on the corn-laws, VIL 375, 377. Dirt bands, in glaciers, X. 686—dirt beds m the Purbeck colite, XV. 208

### DIS-DIS

Dis, VIII 43

DISAFFORESTING, VIII 43
DISC, or disk, VIII. 43—in botany, 1b;
V 129

Discharges of colours in dyeing, VIII 316. Discina, genus of mollusks, XV 339—fossil, XVII, 105

Discinidæ, family of mollusks, XV. 339fossil, XVII 105

DISCIPLE, VIII 43, VI 640.
DISCIPLINE, VIII 43—Scotch Books of
Discipline, ib.; XVIII 490, XIX 781
—of the navy, XVI. 107; effects of, 108; its importance, XX. 28—in universities, XXI, 476, 484

Discoboli, fishes, table of the, XII 307 Discobolus, statue of the, VIII 44, Plate. Discomyza, genus of insects, IX 256 Discopora, genus of bryozoa, XVII 98 Discopyge, genus of fishes, XII 327 Discord, VIII 44; II 110

Discosorus, fossil mollusks, XVII. 112. DISCOUNT, VIII. 44.

Discrasite, mineral, XV. 113 DISCRETE PROPORTION, VIII. 44. QUANTITY, VIII 44.
DISCRETION, VIII 44

Discus, a quoit, VIII. 44

Discussion, freedom of, and its limitations, XIII 371—indecency of, ib DISCUTIENTS, IN medicine, VIII 44 DISDIACLASTIC CRYSTAL, VIII. 44.

DISDIAPASON, in music, VIII. 44.
DISEASE, VIII 44, XVII. 689—simulated diseases, XIV. 427—treatment of live stock under, II 357—effects of electricity on, VIII. 603—diseases exempting from public duties, XIV 426—diseases incident to different professions and trades, 442—effects of anger on, III 141—mineral water for the cure of, XV. 38—diseases of nutrition, XVII. 668, 689-proximate causes of, 689-classification of diseases, ib, 700, 702-of innervation, 697 — reproduction, 702—functional, 691 — organic, ib — contagious, XIX. 612—diseases of Egypt, VIII 422, of Greece, XI 14—Syden-ham on the history of, XX. 894—in United States, XXI 421—treatment of the diseases of the domestic animals,

Surgery Diseases of plants, V 170—of horses, XL 666—of silkworms, XX 293—of timber trees, XXI. 268.

554 See Pathology, Medicine, Medical Jurisprudence, Samtary Science,

DISEMBOGUE, VIII. 44 DISFRANCHISEMENT, VIII. 44. DISGUISE, VIII 44. DISH, VIII. 44.

Dishley breed of sheep, IV. 377. See

Leicester Sheep Disk. VIII. 44. See Disc. Disinfectants, XIX. 621

Disintegration of building stones, XX. 712.

DISJUNCTIVE, VIII 44.
DISLOCATION, VIII. 44—in rocks, XV. 171
—surgical treatment of, XX. 826. Disomum, IV. 735.

DISPART, in gunnery, VIII 44; XI 105, 106

DISPATCH, VIII. 44

DISPAUGRED, VIII 44
DISPENSARY, VIII. 44—London dispensaries, XIII. 678.

DISPENSATORY, VIII 44.

Dispersion, VIII. 44—of mankind, 1b
——of light, VIII. 44; I 920; XVI. 547, 580-polarization of light by, 647. Displacement of a ship, XX. 144-scale of. 162.

OI, 162.
DISPLAYED, in heraldry, VIII. 46.
DISPONDER, in poetry, VIII. 46; IX. 770.
DISPONDE, in Scots law, VIII. 46.
DISQUISITION, VIII. 46.
DISTUPPING OF the Established Church of

Scotland, VI. 405; V. 669; VIII. 393; XVIII. 495—causes of, 494.

D'Israeli (Benjamin), Chancellor of the Exchequer, V. 672. Diss, town in Norfolk, VIII. 46.

#### DIS-DIV

DISSECTION, VIII. 46-of the human body first practised, XX. 811. See Anatomy

DISSEISIN, IN law, VIII 46
DISSENTER, VIII. 46—dissenters in England, 744—their schools, 746—their petition in 1772 for relief, V 474-their attempts in 1787, 1790, and 1791, to obtain a repeal of the Corporation and Test Acts, 522, 536, 538—Earl Stanhope's bill in 1790 for their relief, 534-repeal of the above-mentioned acts, 652-South on their preachers, XX. 451—in Scotland, XIX. 801. See Presbyterianısm.

Disseptiments, in botany, V 131
Disseptiments, in Poland, XVIII 145, 146
DISSIMULATION, VIII. 46
DISSIPATION, in physics, VIII 46—circle of, in optics, ib

- of electricity, VIII 550. DISSOLUTION, in physics, VIII. 46 DISSOLVENT, VIII. 46

Dissolving views, apparatus for, XIV 793,

DISSONANCE, in music, VIII. 46, XV. 725. See Discord. DISSYLLABLE, VIII. 46.

DISTAFF, VIII. 46, XX. 508

DISTANCE, VIII 46—accessible and in-accessible, ib—of the heavenly bodies, 1b -mensuration of distances by sound, II. 99-mode of finding the distances of stars, IV. 96

DISTEMPER, VIII. 46—in horses, XXI 572; XI. 638; effect of, 642—in dogs, XII 722; XI 768; XXI 572-vaccina tion for, XII 722

in painting, VIII. 47—among the Greeks, XVII. 51.

DISTENSION, VIII 47

Disterrite, mineral, XV. 79. District, inflictal, XV. 79.

District, or kyanite, XV 86—electrical properties of, VIII. 538—rock, XV. 135. Districu, VIII. 47.

Distichiasis, in surgery, VIII. 47. Distichocera, genus of insects, IX 145. Distichedus, genus of fishes, XII 246 DISTILLATION, VIII. 47; XX. 556—from potatoes, XVI. 326—in Vacuo, XX 556 —in Clackmannanshire, VI. 750—in Ireland, XII. 521—Scotland, XIX. 805— Sweden, XX. 862-analysis of beer by,

V 337—perfumes made by, XVII. 408. Distillers, dunes paid by, XIII. 435. DISTINCTION, in logic, VIII. 52 Distoma, genus of Entozoa, XXI. 980. Distrain, VIII 52 Distrass, VIII. 52—in English law, ib.

DISTRIBUTION, VIII 52-in rhetoric and painting, 53.

- of plants, in Britain, V 229; of classes, orders, genera and species of plants over the globe, 222—of plants in general, 219—of fishes, XII. 329; insects, IX. 63—animals, XVII. 631 et seq; II. 712; III. 174. See Physical Geography.

- of electricity, VIII. 551. of steam, in the steam-engine, XX. 595

DISTRINGAS, in law, VIII. 53-juratores,

Distyle, in architecture, III. 509. DITCH, VIII. 53-in fortification, ib.; IX.

DITHYRAMBUS, VIII. 53 Dithyrocaris, fossils, XVIL 101 Ditomus, genus of insects, IX. 86. DITONE, in music, VIII. 53.
Ditrema, genus of fishes, XII. 288 Ditriglyph, in architecture, III. 509. DITRIHEDRIA, in mineralogy, VIII. 53. Ditrochæus, foot in prosody, IX. 770. Ditrupa, fossils, XVII. 101. Dittany, false, plant, V. 189 DITTEAH, in Hindustan, VIII 53 · V. 763 DITTO, VIII 53. DITTO, VIII 53.
DITTON (Humphrey), VIII. 53.
Dru, in Hindustan, VIII. 53.
Diurna, family of insects, IX. 206.

DIVAL, in heraldry, VIII 54.

DIVALIA, ancient festival, VIII. 54. DIVAN, VIII. 54.

#### DIV-DOC

DIVERGENT, VIII 54

D'Ivernois (Sir Francis), his recovery of a mortuary register at Geneva, XV. 621,

DIVERSIFYING, in rhetoric, VIII, 54. Divers, family of birds, XVI. 809. DIVERSION, IN WAY, VIII. 54.
DIVERSION, IN WAY, VIII. 54.
DIVIDITY, the pod of a plant used in tanning, VIII 54; IV 240, 331—by

means of smoke, VI 221-by murrors, 339—among the Druds, VIII 180—m ancient Athens, XX. 391—law of Constantius against, VII 306.

DIVINE, VIII. 54. Divine right of kings, V. 718, 719.

DIVING, VIII. 55—for pearls, XVII 357, 444—diving dress, XX 723—how to rise to the surface after, 881

to the surface after, 881
DIVING-BELL, VIII. 59; XL 221—used in excayating the beds of rivers, XVI 70
DIVINITY, VIII 66—divinities of the Egyptians, 435—of Christ, proofs of, XXL 209. See God, Theology.
DIVISIBILITY, VIII. 66

Division, VIII. 67—in algebra, II 491, 495—in arithmetic, III 587—of vulgar fractions, 599—of decimals, 601, 602, 605—by Napier's rods, XV 778—mechanical, VIII 67

- in logic, laws of, XIII 595-com pared with definition, 598-division by dichotomy, 598.

- in a military and nautical sense, VIII 67.

of labour. See Labour Divisors, trinomial, in equations, IX. 294 Divitiacus the Æduan, VIII. 185. Divodasa, V 724

DIVORCE, VIII. 67, 782—in Arabia, III 353—grounds of, in Scotland, XII 54— defences against an action of, 55— -Milton's works on, XV. 25-among

Mohammedans, 304 Drvus and Drva, VIII. 72. Dixa, genus of insects, IX. 228 DIXMUDE, town of Belgium, VIII 72 Dixon (Jeremah), astronomer, XIV 336; IX. 550.

(Prof), on the thermometer, XXI. 223

DIZIER (St), French city, VIII. 72 DJEBAII, Syrian town, VIII. 72 Djem, his claims to the Turkish crown,

XXI. 369, and n. 1. Djezzar, or Jezzar, Pasha, IV. 691, 692, II. 113; VIII. 489.

DJIDDA, in Arabia, VIII. 73; III. 355, 360; XII 785.

Djin. See Genii Dlugosz, Polish statesman and historian XVIII 158

Dmitri, XIX. 474 DMITROV, Russian town, VIII 73. DMITROVSK, Russian town, VIII. 73 DNIEPER, river, VIII. 73; IV. 743, XVII. 646 . XIX. 515

DNIESTER, river, VIII. 73, IV 742, XVII.

646; XIX. 515.

Doab. VIII. 73—doabs in the Punjab. XVIII 687.

- canal, XX. 799

Dobchick, bird, XVI. 809. DOBERRAN, VIII 73.

Dobeln, town in Saxony, VIII. 73 Dobereiner's instantaneous light from platanum, XXI. 630; VI. 458

Dobrizhoffer (M), his account of the Abiponians, II. 41 Dobrouscha, in European Turkey, VIII

73; VII. 654. Dobrowsky (Joseph), on Sclavonic philo-logy, XVII 529.

DOBSONAU, town in Hungary, VIII. 73. DOBSON (William), painter, VIII. 73. — (Dr), on evaporation, IX. 410 DOBUNI, or Boduni, VIII 73. DOCETE, early heretics, VIII. 73; XXI

211.

DOCIMASIA, VIII 73. DOCIMASTIC ART, VIII. 73. DOCIMENUM MARMOR, VIII 73.

#### DOC-DOH

Dock, VIII 74—docks of Sunderland, XX. 807—Bombay, V 1—Leith, XIII. 326—Liverpool, 518—Hartlepool, XI 235—London, XIII. 661, XIV. 808— Dublin, VIII. 226—Dundee, 257—New-castle, XVI. 168—Portsmouth, XVIII. 379-Sheerness, XX. 95-Southampton,

DOCK-YARDS, VIII 78—established by Henry VIII, XX, 126. Dock plant, V 204

DOCKET, or Docquet, in law, VIII 87 Docker, or Docques, maw, viii 87
Docker, or William), London penny-post
established by, XVIII 405
Doctor, VIII. 87—degree of, XXI 447,

451, 458, 464, 470, 484. See Degree, Academical.

DOCTORS' COMMONS, VIII 87; VII 113. DOCUMENT, in law, VIII 87—forgery and falsification of documents, XIV. 427.

plant, V. 173

Doddridge (Philip), D D, VIII 88. Dodecagon, VIII 88. Dodecahedron, VIII 88 Dodecapolis, Ionian, XII 443

Dodecastyle, in architecture, III 509 Dodungton (Bubb), VII. 582; XII. 797 Dodo, an extinct bird, VIII. 88; XIV 363; XVII. 796; XVII. 156, 633, 637— Strickland's work on, XX. 782.

Dodona, town of Epirus, and sear of an oracle, VIII. 88; XV 766.

Oracle, VIII. 85; XVI. 88.
DODGNIAN, VIII. 88; XVI. 383.
DODGLEY (Robert), VIII. 89; XIII. 525—
his annual register, V. 775
Dodson (James), on bills of mortality,
XII. 398; XV. 602

Dodwell (Henry), VIII 89—on baptism, IV 425—Dr Samuel Clarke's refutation of his statements on the immortality of the soul, VL 757.

Doebereiner. See Dobereiner Doffing-board, in silk manufactures, XX.

282, 283, n
DOFRINES, VIII. 89; IX. 382.
DOG, VIII 89; XI 762; XIV. 159—teeth
of, XVI. 461—wild Asiatic, III. 789 vocal organs of, 101-"worm" in the tongue of, 100—language addressed to, XII 46; XX. 220—instance of presentiment in a, V 704—wild, of the Hima-layas, XI 455—of Lapland, XIII. 240 vaccination of, XII. 722-23—origin and varieties of, XIV. 160—poison in the bite of a mad dog, 440—employed in smuggling, X. 276—mange in, XII. 663; XXI. 578-nutritive system of, XVII 657 - in Egypt, VIII. 432-sporting dogs, XX. 218—pointers and setters, ib—spaniel, 220—retrievers, 220—question as to the descent of all dogs from one common stock, 218—breaking of, 220—peritomis m, XXI 567—diseases of the ear of, 578—hydrophobia, 575.

See Hound, Veterinary Science.
Dog-days, VIII. 89, VI 173
Dog-fise, VIII. 89; XII. 321, 322, IX. 763.

Dog-star, Sirius, VIII. 89; VI. 173; IV. 79

Dog-watches, VIII. 89. Dogbane order of plants, V. 199 Doge, VIII. 89—of Genoa, X 454— Venice, his palace, XXL 538 DOGGER, Dutch vessel, VIII. 90.

DOGGERBANK, VIII 90; IX. 648 and n. DOGGERS, VIII. 90

Doggett, actor, XXI. 174. Dogma, VIII. 90.

Dogmatic metaphysics, XIV. 603 -- subdivisions of, 604-dogmatic theology, XXI. 183.

DOGMATICAL, VIII. 90.
DOGMATICS, VIII. 90.
DOGMATICS, VIII. 90—relation of scepticism to, XIX. 706.

DOGMATISTS, VIII. 90. Dogwood, XVII. 764.
Dohrn (C. A.), his work on insects, IX. 24. DOI-DOM

Doig (David), VIII 90. Doir, coin, VIII. 92.

DOKKUM, town of Holland, VIII 92. DOLABELLA (Publius Cornehus), VIII. 92.

genus of mollusks, XV 372. Dolci (Carlo), painter, VIII, 92. DOLE, VIII 93.

Dolerites, XV 133, XXI 606-soils from, II. 391-their association with trachytes, XV. 191.

Dolgelley, in Wales, VIII. 93; XIV 544
—waterfalls near, 543.

Dolichitis, cranium and teeth of, XVI 453

Dolichopodes, family of insects, IX. 242. Dolichopus, genus of insects, IX. 243 Dohchosaurus, fossil reptiles, XVII. 152. Dolichurus, genus of insects, IX. 195 Doholum, genus of mollusks, XV. 336, 333. Dohum, genus of mollusks, XV. 386, 364 et seq

DOLLAR, village in Clackmannanshue. VIII 93

- com, VIII 93; XV 445

Dollart, mundated tract in Holland, XI 581.

Dollinger (Dr), his essay on the religion

of Mohammed, XV. 304.

DOLLOND (John), VIII 98; II. 90, I. 749—his achromatic glasses, 750, II. 91; XVI. 535—his variation transit, and diurnal variation instrument, XIV 81-his double-image micrometer, 747 —his four-glass eye-piece, XXI 125 — (George), his spherical crystal mi-

crometer, XIV. 753-his pancratic eye-

pieces, XXL 125.

PIECES, AAL 129.

(PETER), VIII. 94; XVI. 535—his achromatic glasses, II 92—his improvement of micrometers, XIV 748

Dolomedes, genus of arachnides, III. 382. DOLOMIEU (Diodatus, &c., de), VIII. 94 Dolomite, mineral, XV. 92—rock, 154— Tennant on, XXL 153

Dolphin, VIII. 97; XII 295; XIV 222—velocity of its swimming, XII 329 dentition of, XVI 444, 445—chemical composition of the teeth of, 418—gangetic 

Dol-y-frwynog, gold deposits at, XV. 233. Dom or Don, VIII 97

and Som, VIII. 97.
DOMAT (Jean), VIII. 97

Dombreck, river in the plain of Troy, XXI. 356.

Dombrowski (General), XVIII 152, 153,

DOME, VIII 97; III 410, 509-seems to have been invented by the Etrumans, 401—of St Sophia at Constantinople, 402—construction of, 410—equilibrium of, 411—of St Paul's, London, 410, 411, 483—of St Peter's, Rome, 413, 452, 483; XIX. 368—best form of, III. 412—of cathedral at Florence, 450—the boast of the Italian school, 452—curves proper 401 - of St Sophia at Constantinople, for, 412-dome-vaulting, 413, 414. the Farnese Palace, 452—principles of its stability, 411—in Baghdad, IV 363 -its beauty considered, III. 483-construction of wooden domes, XIX. 388principles of, XX. 719 -- to find the joints of a, 730

or Doom, VIII 97. DOMENICHINO (Zampieri), painter, VIII. 97; XVIL 73

Domery (Charles), voracity of, VIIL 23. DOMESDAY, OF DOOMSDAY BOOK, VIII. 98, 669-King Alfred's, IL 481.

DOMESTIC, VIII. 99—manufactures, XIV. 281—in Russia, &c., 282—servants, 349—cleanliness, 440—life of the Egyptians, VIII. 440, 446—policy of the United States, XXI. 438.

Domeykite, mineral, XV. 117. DOMERONT, French town, VIII. 99 DOMEFYING, in astrology, VIII. 99. DOMINANT, in music, VIII. 99. DOMINATION, IN theology, VIII. 99.
DOMINGO (St), VIII. 99. See Hayti.
DOMINIG DE GUZMAN, VIII. 99, 100; XII. 386; XV. 408.

### DOM-DOR

DOMINICA, island, VIII 99. DOMINICAL, VIII. 99 - LETTER, VIII 99; VI 80, 81. Dominican republic, II. 708; XI 258 Dominicans, religious order, VIII 99; XIV 497—origin of the, XII 387—their dispute with the Franciscans regarding the immaculate conception, 365-their dispute with the Cordeliers, XVII 746 DOMINIS (Marc Antonio de), VIII. 100— on the rainbow, I 625, XVI 526 DOMINIUM DIRECTUM, VIII. 100 DOMINO, VIII 100. DOMINUS, VIII. 100,

Domite, XV 132 DOMITIAN, Roman emperor, VIII. 100reign of, XIX. 340

DOMREMY LA PUCELLE, French village, VIII 100-birth-place of Joan of Aic. TTT. 399

Dox, title of honour, VIII. 100

Cossacks, land of, VIII. 100 See Cossacks.

- Cossacks of the, VIII. 100; VII 423

(George), botanist, IX 781 river of England, VIII 100 river of Scotland, VIII. 100, II. 33, XIX. 794.

river of Russia, VIII 100; XVII 646; XIX. 515; XXL 671. DONABUE, VIII. 100; V. 646 Donacia, genus of insects, IX. 147.

DONAGHADEE, VIII. 101, 122 Donald, king of Scotland, XIX. 748. DONALDSON (Walter), VIII 101

——— (Dr), on the Book of Jasher, XII.

DONARIUM, VIII 10L Donat (Jerome), V. 55.

Donatello, sculptor, XIX. 860, 861. Donation, VIII. 101 Donatists, VIII. 101; II. 644—origin of,

L 525. DONATIVE, VIII. 102

- (Tiberius Claudius), his Life of Virgil XXI 593 DONAUESCHINGEN, town of Baden, VIII

102-at the source of the Danube, VII 652.

DONAUWERTH, town in Bavaria, VIII. 102 Donax, genus of mollusks, XV 350, 347 DONCASTER, in Yorkshire, VIII. 102; XXI. 959.

DONEGAL, Irish county, VIII. 102.
DONEGALILE, in Cork, VIII. 106; VII. 370.
Dongo, in Africa, III. 165.
DONGOLA, in Nubia, VIII. 106—language

of, XIII. 219-New and Old, VIII 106. DONGUEPORE, in Hindustan, VIII. 106. Doni (G. B.), on melody, XV. 715. DONJON, VIII. 106, VI. 327; XVIII. 566 Donkey engine, XX. 649

Donkin (Mr), his invention of printing rollers, XVIII. 547. DONKE (Dr John), VIII. 106—Walton's Life of, XXI. 696.

Donneau di Vesé, his Mercure Galant, XVL 197.

DONNYBBOOK, VIII. 107-fair, 214 Donovan (Edward), his works on insects, IX. 12—on birds, XVI. 781 DOOMSDAY BOOK, VIII. 107. See Domesday Book.

Doon, over in Ayrshire, VIII, 107; IV. 332

- (Loch), XIX. 790; IV. 382. Dooraunees, pastoral tribe of Afghans, II.

DOORNIK. VIII. 107. See Tournal. Doors, in architecture, III. 488—seldom used by the Romans internally, 445—in joinery, V. 752—hinging of, XII. 818. Dooshar, VIII. 107; XII. 719, Dooshee, XI. 779. DOR, VIII. 107.

Doracerus, genus of insects, IX. 144.

#### DOR-DOU

DORADO, constellation, VIII. 107. DORAK, Persian town, VIII 107. Doras, genus of fishes, XII. 262—their travels on land, 259 Dorat (Jean), VIL 663. Dorcadion, genus of insects, IX 146 DORCHESTER, in Dorsetshire, VIII. 107, 111, 268-remains of an amphitheatie

near, 112-tumuli near, ib - village in Oxfordshire, VIII. 107. heights, XXL 750.

DORDOGNE, in France, VIII. 107 Dorfel on the orbits of comets, VII. 167 Doria (Andrea), Genoese admual, VIII 108; X. 453—his expedition against

Algiers, II 569.

— palace, XIX. 369 DOBIAN, or Doric Mode, in music, VIII. 108; XV. 707

DORIANS, VIII 108, XX. 499

DORIC, VIII. 109—order of architecture, 1b, III 514, 515—conjectures as to its origin, 441—Roman, 444, 469, 475—modern Italian, 451, 477—Greek, 460, 463—remarks on, 486.

- DIALECT, VIII. 109-of Yorkshire. XXL 959 - MODE, in music, VIII. 110. See

Dorian Mode Doring, or Daring, VIII. 110-Doring-

glass, XIX. 93. Doris, state of ancient Greece, VIII 110.

genus of mollusks, XV. 371 steam-ship, trials of screw-propellers in, XX 660

DORKING, town in Surrey, VIII 110-fowls, II 356; XVL 788, XX. 836 DORMANT, in heraldry, VIII. 110, XI 332. DORMER-WINDOW, in architecture, VIII.

DORMITORY, VIII. 110 DORMOUSE, VIII. 110; XIV. 180-its hybernation, III, 180,

DORNBIRN, town in the Tyrol, VIII. 110. Dorner on ethics, XV 537-38 DORNOCE, VIII 110; XX. 842.

FIRTH, VIII. 110; XIX. 794; XX. 841—tidal phenomena of, XVI. 58—bar in, 80, 81.

Dorogobuse, Russian town, VIII 110.

Dorpat, in Livonia, VIII 110—observatory of, III. 819—telescope, IV 150; I. 752, n—university of, XIX. 581, 582; XXL 492.

DORSAI, VIII. 113—vertebræ, 'm man, III. 6—m brutes, 75, 84—vessel, in insects, IX. 48—fins, XII. 206. Dorse, fish, XIL 269

DORSETSHIRE, VIII 110-sheep, IL 346population and value of property, VIII. 754-great oak m, XXI. 270.

Dorsibranchia, order of annelides, XI. 296.

Dorsiferous plants, VIII. 113. Dorz, in Holland, VIII. 113—synod of, III 617; XL 573, 588; XVIII. 488 Dorthes (Mr), on a swarm of ants at Montpellier, III. 265.

DORTMUND, in Westphalia, VIII 113.
Dory, family of fishes, XII 298
fish, XII. 298; IX. 634—as an

article of food, 765. Dorycera, genus of insects, IX. 255. Dorychthys, genus of fishes, XII. 315. Dorylus, genus of insects, IX. 194. Doryophrys, genus of fishes, XIL 313. Doryphora, genus of insects, IX. 149. Doryphori, VIII. 113.

Doryphorus, genus of reptiles, XIX. 31. Dorypterus, genus of fossil fishes, XVII

Doryrhamphinæ, sub-family of fishes, XII.

Doryrhamphus, genus of fishes, XII. 315. Dositheans, Samaritan sect, VIII. 113. Dosser, VIII 113.

Dossil, in surgery, VIII. 113. Dorrs, town of Hungary, VIII. 118.
Dots, engraving in, VIII. 799, 800.
Dorraed, VIII. 113.
Dottarel, bird, XVI. 797—shooting of,

XX. 216. DOUAL, or DOUAY, French town, VIII. 113—bible, IV. 708.

### DOU-DOW

DOUBLE-BASS, VIII 113; XV. 709 Double counterpoint, in music, XV 734. - entry, in book-keeping, IV. 29 Doubleday (Edward), his entomological works, IX, 19,

- (Henry), his work on Lepidoptera IX. 20

Doublers, electrical, VIII. 614. Doubler, a counterfeit gem, VIII 113-lenses, XIV 771, 773, 774, 775 DOUBLETS, a game, VIII 114 DOUBLING, VIII. 114-in silk manufacture

XX. 281, 284. DOUBLOON, COIN, VIII. 114; XV. 442. Doubs, in France, VIII 114.

Douce (Mr), on the Morris dance, XV. 598 DOUCHE, VIII 114.

Douff, VIII 26

Douglas, capital of the Isle of Man, VIII. 119, XIV. 245, 246. castle of, anecdote regarding, VI.

earls of, XIX. 759, 770 et seq (Gavin), bishop of Dunkeld, VIII
114—on Caxton's translation of Virgil,

(Sir Howard), on gunnery, XI 122, 125, 127, 139, 144—on carronades, 141—on Hale's rockets, 143—his work on artillery, 145

(James), of Cavers, on Goethe, X.

on the peritoneum, IL 838 — (Mr), botanist, his death in the Sandwich islands, XVIII. 271. Douleia, VIII. 120 Doune, in Perthshire, VIII 120

Dour, town in Belgium, VIII 120 Douro, river, VIII 120; XVII 605, 646 -dispute between Spain and Portugal about the navigation of, XVIII 391wine districts of, 397; XXI 884, 885passage of, by the British, 822

Douw (Gerhard), painter, VIII. 120. Dove, VIII. 120 See Pigeon. - (M), on isothermal lines, VI. 772.

773 — on atmospheric pressure, 773, XIV. 668, 669—his law of storms, VI. 774-on the variation of the needle, XIV. 54—his law of rotation of the wind, 649-on temperature, 673; XVII. 613-on the dependence of atmospheric pressure, &c., on the direction of the wind, XIV 677, 678—his works on meteorology, 689—his chart of isabnormal lines, 611-area of greatest cold indicated by, XVIII. 177.

nver, VII 754; XX 529 Dove-colour, dyeing of, VIII 320 DOVE-TAILING, VIII. 120; XII 810. DOVER, in Delaware, VIII. 121; VII. 704 - m Kent, VIII 120-population, XIII. 67—harbour of refuge at, XI 222 -foundations of the pier at, XX. 723 - m New Hampshire, VIII. 121;

XVI 174 - straits of, VIII. 792-Blanchard's aerial voyage across, II. 178. Doveran, river, XIX. 794 Dovre Fjeld, mountains, XVL 320.

Dow (Alexander), on the Oude family, XVII. 19, 20. Dowager, VIII 121 Dowdal (Archbishop), XII 476 Dowdeswell (Mr), on the state of crime in India, XI. 521, 522

Dower, in carpentry, VIII 121. Dowelling, in joinery, V. 750. Dower, VIII. 121. Dowlais foundry blast furnace, XIL 545.

Dowlas, coarse linen cloth, VIII. 121. Dowletabad, in Hindustan, VIII 121. Down, Irish county, VIII 121—agricultural statistics of, XII. 516, 517.

of birds, VIII. 124—eider, 518.
of plants, XI. 183; V. 75.
DOWNHAM, town in Norfolk, VIII. 124. Downie (David), V. 555.
Downatrick, VIII. 124, 122—abbey of, 124—Struel Wells near, ib

Downs, VIII. 124-in Dorsetshire, 111-

#### DOW-DRA

Kent, XIIL 64-Surrey, XX. 836-Sussex, 839.

Downs, roadstead off the coast of Kent, VIII 124; XIII. 65 DOWNTON, town in Wiltshire, VIII. 124.

Dowex, VIII 124, 121. Doxology, VIII. 124

Doyère (L), his work on insects injuri-ous to corn, IX. 23. D'Oyly's Letters to Sir William Drummond, VIII. 195

Drab, dyeing of, VIII 320. Drabler, VIII 124. DRABS, VIII. 124

DRACHMA, VIII 124, VII 67, XVI 359. Draco, Athenian lawgiver, VIII. 124, IV. 193—legislation of, 213—constellation, VIII. 124, 125; IV.

genus of reptiles, XIX. 32.
DRACONARIUS, VIII 125
DRACONTIC MONTH, VIII. 125. DRAGOMAN, VIII 125

Dragon, fabulous serpent, VIII. 125, XIX. 32, 33—in heraldry, XI 334 —— Head and Tail, VIII 125

DRAGON'S blood, VIII. 125.

Dragon-fly, IX. 176—lives after decapita-tion, III. 177—fossil dragon-flies, XVII.

Dragon-trees, V 84, 212-of Orotava, 101; VI 166-Madeira, XIII 800 DRAGONNEE, in heraldry, VIII 125

DRAGOON, VIII. 125 See Army, Cavalry. Dragoon horses, XL 657. DRAGOONING, VIII 125.

DRAGUIGNAN, town of France, VIII 125. DRAINAGE, VIII 125, IL 287, 398; V 163—of towns, III. 494, 495, XIX. 618 of Bedford level, IV. 568-in Holland, XL 581-of the Haarlem Meer, 173-of mines, XV. 226—acts for, IL 264— Smith of Deanston's system, ib -- pump for, XII. 176-of tow-paths, XVI. 57increase of heat in the soil from, XI 700-of plantations, XXI, 273-in Cambridgeshire, VI. 115-its effect on salmon-fisheries, IX. 607, 626—drainage basins of rivers, XVII 592, 646 See Drains

Drains, different kinds of town drains, VIII. 128; their importance to health, XIV 444-building of, V. 734-direction of, VIII. 133—depth, 134—distance between, 1b -in connection with ilrigution, XII 612 et seq. See Dramage
DRAKE (Sir Francis), English admiral,

VIII. 132\*, IV 335, V. 500, 501—his expedition against Cadiz, VIII. 712. - (Dr), on Shakspeare, VIII. 153

on Dunbar's poetry, 247, n 4.
DRAKENBORCH (Arnold), VIII. 133.\*

DRAMA, VIII 183 \*-ancient, 184 \*-modern, 143-Chinese, VI. 579-Italian, II. 479-Peruvian, 688-Etruscan, IX. 359-Spanish, XVIII 114; XX. 494-Greek, 86, 381-of Alfieri, II 479-Arisstage-dances, VII. 646—pastoral dramas, XVIII. 111—female character, as exhibited in, XX 86, 87—Spalding on the English, 495. See Comedy, Tragedy, Theatre

Dramali (Pasha), XI 26, 27. DRAMMEN, in Norway, VIII 169. Dran (Henri-François le), French surgeon, VIII. 169; XX. 818

Draper (Dr), on the rays of the spectrum concerned in the decomposition of caibonic acid by the green parts of plants, V. 105; his researches on the electromotive power of heat, XXI. 654.

Drapery, in sculpture, XIX. 857. Drapetis, genus of insects, IX. 236. Drapiez (Prof.), his works on insects, IX.

Diassus, genus of arachnides, III. 379. DRASTIC medicines, VIII. 170. Draught of water, in ships, XX. 161, 162.
Draughts, as a Roman game, XIII 248.
DRAVE, river, VIII 170, VII 653; XII 10
DRAWHACK in commerce, VIII 170. Sce Commerce.

#### DRA-DRO

Drawing, VIII. 170-on stone, XIII 511 —by the camera lucida, VI 117—drawings for joinery, XII. 806—drawing machines, XIV. 415—of miniatures, XV. 249. See Perspective

Drawing-frames, in spinning, XX. 511in weaving, XXI 784

DRAY, VIII 175—horses, IL 237.
DRAYTON (Michael), English poet, VIII 175—his praise of Herefordshire wool, XXI 910

DREAMS, VIII. 176; XIV. 583; XVII 680; III. 321, n—of the blind, IV. 778 Drebell (Cornelius), his thermometer, IV 456-his submarine vessel, VIII 59 his discovery of the mode of dyeing scarlet, 274

Dredging, VIII. 176; XVI 68. Dreelite, mineral, XV 95. Dreissenia, fossil mollusks, XVII 106 DRELINCOURT (Charles), Calvinistic divine, VIII 176

- anatomist, II. 762. DRENTHE, in Holland, VIII 177. Drepane, genus of fishes, XII. 302. Dresden, VIII 177, XIX. 685—Napoleon at, X. 163—Royal library at, XIII 419 -porcelain, XVIII 436, 438, 445-ope-

rations of Fiederick the Great near. 652, 653 Dress-of the ancient and modern Egyptians, VIII. 434, 445—its importance to health, XIV 441—in universities, XXI

448, 476 See Clothing.
Drest, Piclish king, XIX. 742
DREUX, in France, VIII. 178.
DREVET (Pierre), VIII. 178 Dreyer (Mathew), his works on anonymous books, IV, 711.

DRIFFIELD, Great, town in Yorkshire, VI L

DRIFT, in navigation, VIII 178-in mining-sail-wood, ib-nets, IX. 635 - great northern, XV 215 

Dulling wheat, compared with broadcast sowings, IL 308.

Drilling of soldiers, VIII. 178 Drinius, river, XI. 11. DRINK, VIII. 178 Drinking, process of, XVIII 76.

Drimodoon, in Arran, caves of, III. 676 Dripsrone, in architecture, VIII. 178; Dritzehen (Andrew), XVIII 526.

DRIVING, in metalluigy, VIII. 178.

a sea term, VIII. 178 Drobisch on logic, XIII 577, n.-on syllo-

gisms, 628 DROGHEDA, town in Leinster, VIII 178ancient monument at New Grange, near, XIV 377 - manufactures, ib-

taken by Cromwell, XII 484 DROHICZYN, IN Russian Poland, VIII, 179. DROHOBYCZ, IN Galicia, VIII 179.

Droits of Admiralty, II 144. DROITWICH, in Worcestershire, VIII 179 -salt manufacture, XIX. 582, 583; XXI 928.

Dromas, genus of birds, XVI. 800. Dromatherium, fossil mammal, XVIII.157 DROME, in France, VIII 180

Dromecus, genus of birds, XVI. 796
Dromecus, genus of birds, XVI. 796
Dromedary, VIII 180, XIV. 205—teeth
of, XVI. 466—bred in some of the Canary islands, VI. 167—Arabian, III. 346
Astein 740. -Asiatic, 740.

Dromia, genus of crustacea, VII. 541 Dromilites, fossil crustaceans, XVII. 102 Dromius, genus of insects, IX. 82. DROMORE, Insh town, VIII. 180. DRONE, VIII. 180 See Bee. DRONERO, in Piedmont, VIII 180.

DRONFIELD, in Derbyshire, VIII. 180 Drongos, birds, XVI. 751. DEONTHEIM, IN NORWAY, VIII. 180. See Trondhjem.

DROPPING-TUBE, VIII. 180. Drop-measurer (Brewster's), XII. 87. Drops, form of, XII. 102. - ın architecture, III 509.

#### DRO—DUB

DROPSY, VIII. 180; XVII. 690-in cattle, XXI. 567.

Dioseiaceæ, nat order of plants, V. 183. Drosophila, genus of insects, IX. 256. Drososcope, VII 766 Drossen, Prussian town, VIII. 180.

Drouillard, affair of, X. 228.

Drowning, VIII 180—death from, XIV 430—Royal Humane Society of London, XIII. 673—why the body of a person drowned first sinks and afterwards rises again, XX. 880, n.

Drug-shops, police of, XIV. 441.
Drugget, coarse woollen cloth, VIII. 183. Drugs, Himalayan, XI. 444

Drugs, rimalayan, 222 Drugs, or Diolum, VIII. 183 Drugs, VIII. 183—in Anglesey, III. 146 -destroyed by P. Paulinus, V. 378--in Britain, 374, 375-Cæsar on their mode of education, XI 599; IV. 443-of Iona, XII 441—Celtic, VI. 366—their ceremony named Deiscal, VII. 700—their glass rings, X 658

DRUM, VIII 190-kettle-drum, ib , XV 713 — bass-drum, 713 — for threshing machines, IL 283—of the ear, XVII.

DRUMNOND (William), poet, VIII. 190—his notes of Ben Johnson's conversa-tion, XIII. 7—his bequest to the library of the University of Edinburgh, 402 (SIr WILLIAM), VIII. 194-on the

conquests of Sesostris, III. 622, n 4.

(Dr), on intestinal worms, XXI

977 n. 2, 978 n. 4, 980 n. 3

(Alexander), his lectures on the

civil law, VII 585 n. 3.

(M1, M.P.), his speech on the newspaper stamp duty, XVI 191 (Peter), his tract enterprise, XX

Drummond-light, its application to lighthouses, XIII 480-as a signal in triangulation, IX. 555.

prumore, battle of, V. 441. Drums, fishes, XII 284 Drumenness, VIII 196—in Lapland,

XIII. 239; Norway, XVI. 326 Drupe, in botany, V. 138.

Drury (D), his work on insects, IX. 6.

Lane Theatre, XIII. 675; XXI 168, 170, 174, 176-roof of, VL 266

DRUSES, VIII. 197, 478; XX. 908; XXI 378—their Confession of Faith, ib their contests with the Maronites and Turks, XVII. 198; XXI. 374.

Drusilla, XIX. 335—Jewish princess, 340 Drusius (John), VIII. 200. Drusus, German expedition of, X. 575.

- (Livius), tribune, XIX. 320. DRYADES, nymphs, VIII. 201, XVI. 396. DRYANDER (Jonas), naturalist, VIII. 201 Dry measures, XXI. 808.

- pile, electric or, XXI 619. - ROT, VIII 206, V. 173—Bramah's patent for preventing, 274—in ships, VIII. 76, 77; XX. 166; means of preventing it, XVI. 98, 99; XX. 167, XXI.

Dryburgh Abbey, IV. 681—Sir Walter Scott buried at, XIX. 823; XXI. 399. DRYDEN (John), VIII. 202, 797—on the haughtiness of Hobbes, I. 338-on heroic plays, VIII 161-his confession of indecency in his dramatic works, 163his translations of Juvenal, XIII. 30sum paid for the copyright of his Fables VII. 355—poetry of, XVIII. 123—his satire on Settle and Shadwell, XX. 63, 68-on Shakspeare, 71, 72, 73-his defective reading, XXI. 172.

Dryiophis, genus of serpents, XIX. 57. Drylus, genus of insects, IX. 110. Drymeia, genus of insects, IX. 250. Dryomyza, genus of insects, IX. 251. Dryopithecus, fossil apes, XVII. 167. Dryopthorus, genus of insects, IX. 140. DRYSALTER, VIII. 213 DUAL, VIII 213; X. 747.

DUALISM, VIII. 213.

Dualistic hypothesis on the origin of evil, TX 420 DUBLIN, VIII. 213-Royal Itish Academy

### DUB-DUF

at, IL 67-bridge built by Mr Steven, VI. 382, n 1—study of mathematics at, L 807—libraries of, XIII. 404—gazette, X. 444—university, XII 478; XXI 485 —Trinity College library, XIII. 403— newspapers of, XVI 185—variation of the needle at, XIV. 53—meteorological observations at, 688-metropolitan police, XVIII. 207, 208—post-office statistics, 416—early printing at, 533—list of societies in, XX. 368

Dublinensis (Codex), XIX. 838 DUBNO, town in Russian Poland, VIII.

DUBOL, town of Hindustan, VIII 227 Dubois (Jacques), anatomist, II, 757. (M.) his work on magnetic experiments, XX. 428

Du Bois-Raymond (Dr), on animal electricity, I. 961-on voltaic electricity, XXI. 633.

Dubos (Jean-Baptiste), VIII. 227 Duboscq (M), his manufacture of stereoscopes, XX 685.

Dubris, Roman name of Dover, VIII. 228,

120 Dubrunfaut (M), on optics, XVI 679, 681.

Dubuat (Chevalier), on hydrodynamics, XII 73, 121, 125 et seg , I. 725, 886, 887; XVI. 60—on the motion of rivers, XIX. 187-on the resistance of water, 191 et seq.-on seamanship, XX 3

DUBUQUE, in Iowa, VIII. 228, XII. 460. Ducal orders of knighthood, XIII 123. Du Cange See Cange

Ducas (Michael), Greek historian, VIII.

(Michael), emperor, VII 316. (John), VII 316, 317. DUCAT, foreign coin, VIII. 228; XV. 441, 442, 444, 445,

DUCATO, Cape, ancient Leucate, VIII. 228 DUCATOON, silver coin, VIII 228.

DUCENARIUS, VIII 228 DUCENTESIMA, VIII. 228. Ducetius, II 421

DUCHAL (James, DD), VIII 228 Duchemin (General), on gunnery, XI 145 Duchet (M), on the production of wax,

IV. 573. DUCHY, or Dutchy, VIII. 228-

feudal law, IX. 524

Duck-billed platypus, XIV. 193. See Ornithorhynchus

Duck-shooting, XX. 217. DUCKING-STOOL, VIII. 228.

Duckweed, order of plants, V. 214.

Duckworth (Sir J.), his naval expedition to Constantinople, V 603—his defeat of

the French squadron against Jamaica, XII. 674—his passage through the Dardanelles, XXI. 371, n Duclos (Charles Pineau), VIII. 228

Ducouédie's hive, III. 296. DUCT, VIII. 229.

DUCTILITY, VIII 229; XX. 749, 752—of metals, VI. 482.

Ductor, genus of fossil fishes, XII 345. Dudevant (Madame), character of her novels, XIX. 290.

DUDLEY (Edmund), VIII. 229.
——— (JOHN), Duke of Northumberland, VIIL 229, 707.

(Sir Robert), Earl of Warwick. VIII 229

- (Robert), Earl of Leicester, VIII.

(Lord Guildford), VIII. 707, 709. in Worcestershire, VIII. 229; XXI.

DUEL, VIII. 230; VI 611, 626, 627—with the sword, IX. 502—duty or avoiding, XV. 567—mania for luelling in the seventeenth century, XIX. 163.

Dufay (M.), on dyeing, VIII. 274-on electricity, 525; I. 733. Duff (Patrick), of Elgin, fossil reptile discovered by, XVII. 129.

### DUF-DUM

Dufour (Leon), his works on insects, IX 14-on the skeleton of the articulata, 30, 31-on the arachnides, III. 370, 377, 379 et seq -on earth-worms, XI. 501.

(M Arles), on the silk manufacture of France, XXI 793.

on fortification, IX. 833. Dufrenite, mineral, XV. 101.

Dufrénoy (M.), on the hot-blast, XII. 552 Dufrenoysite, mineral, XV. 119. Duftschmid (Gaspard), his work on in-

sects, IX. 11.

DUEDALE (Sir William), VIII. 232
Dugés (M.), his experiments on earthworms, XL 301—on entozos, XM.

Dugganahs, Bornouese tribe, V. 53. Dugono, in zoology, VIII 232, XIV. 218—section of a tooth of, XVI. 411—

Arctic, its dental system, 443-jaw and teeth of, 446

Duguay, Trouin, V. 282. DUHALDE (Jean Baptiste), VIII. 232.

DUNAMEL (de Vrigny le Monceau Henri Louis), VIII. 232—his artificial magnets, XIV 69-on the structure of bone, II 764-on bodies which do not conduct heat uniformly in all directions, I 952 -on the durability of ropes, XIX. 402 -his experiments on the strength of materials, XX. 764, 773-on the growth

of trees, XXI 269—on the difference between firs and punes, 274.

(JEAN BAPTISTE), VIII 234.

DUILITS (Cains Nepos), VIII. 234; VI.

Duisburg, in Rhenish Prussia, VIII. 234 Dujardin on the supposed organ of sight in animalcules, III. 207—on the origin of these animals, 209-his works on insects, IX, 21-on zoophytes, XXI, 977, 978, 979,

- (M), method of microscopic ıllumination erroneously ascribed to, XIV

797.
DUKE, VIII. 234—duke-duke, 235—coronet of a, XI. 336.

DUKINFIELD, in Cheshire, VIII 235 Dulcigno, in Albania, VIII. 235. Dulcinus, III. 306

Dules, genus of fishes, XII. 277-fossil, 343

Dulfield (J), his works on insects, IX. 4. Dulong (Pierre Louis), I. 952—his eminence as a chemist, ib -on the law of cooling, ib -his memoirs on the laws of heat, 953—on the elasticity of steam, ib, 958-his character, ib.-on the expansion of mercury, 957—his method for measuring the expansion of bodics, XVIII 703-his experiments on steam,

XX. 558. Dulse, V. 218.

DULVERTON, in Somerset, VIIL 235. DULWICH, in Surrey, VIII 235-

- College, erected by Edward Alleyn, II. 591. Dum Dum, disaffection among the Sepoys

at. XVI. 301. DUMARSAIS (Cesar Chesenau), VIII. 235.

Dumas (Alexander), his Diary of a Physician, XX. 424.

(General), on Napoleon's policy to-wards Poland, X. 144. - (M.), on physiological chemistry,

XVII. 654 Dumb See Deaf and Dumb.

Dumbarton, Scotch county, VIII. 235— agricultural statistics, XIX. 796, 797, 798-population, 799.

town, 236; XIX. 743.

DUMBNESS, VIII. 237. See Deaf and

Dumb. Dumeril, his classification of animals, III.

190-his arrangement of the genera of

the Iguanus, XIX. 30, n. 4

DUMFRIES, Scotch county, VIII. 237—
mountains of, XIX. 790—agricultural statistics, 796, 797, 798—population, 799 -trignometrical survey of, XXL 382,

- town, VIII. 238. DUMONT (Etienne), VIII. 240-Bentham's

# DUM-DUN

obligations to, I. 402—his notices of Mirabeau, XV. 259 et seq.
Demont (Jean), VIII 243.
———— (M.) on the rocks of Belgium and

the Rhine, XV. 199.

DUMOURIEZ (Charles François), VIII. 243, V. 544, 550, X. 66 et seq Dun, or Burgh, VIII. 244.

Duna, Dwina, or Dvina, Russian river, VIII. 244, XVII. 646, XIX. 516, 514. Dunaburg, in Russian Poland, VIII. 244. Dunadeer, vitrified fort at, IX. 790, IL.

Dunagoll, vitrified fort at, VI 26 Dunagoll, VIII. 244—battle of, V. 413; VII. 513—herring trade of, IX. 685, n -water conveyed in pipes to, XIX.

196 - (WILLIAM), poet, VIII. 244racter of his poetry, XVIII 121.

(Dr), on the embassy from Rome to consult the Athenian laws, VI. 740. DUNBLANE, VIII. 251-cathedral of, XVII.

Duncan (Adam, Lord Viscount), VIII. 251 -his victory at Camperdown, V 561, X. 107

(Dr), of Edinburgh, XIV. 424. (Dr Henry), of Ruthwell, savings. banks founded by, XIX. 656.

- (James), his works on insects, IX. 20—his Entomologia Edinensis, 77, n 2 —insects discovered by, 115— on the geology of Roxburghshire, XIX. 452, 453.

- (John), of Glasgow, his tambouring machine, VIL 449

(M1), African traveller, II 210 (Mr), his arctic expedition, XIX.

(Mr), on the use of synoptical tables, XXL 986
—— Scottish king, XIX. 746

- (THOMAS), painter, VIII. 255. DUNCANSBAY HEAD, promontory, VIII. 255; VI 62.

DUNCOMBE (William), VIII 255.

DUNDALE, in Ireland, VIII. 255; XIII.

DUNDAS (Henry, Viscount Melville), VIII 255—his measures relative to the affans of the East India Company, V. 507, 509, 514, 521, 534, 549—on the slave-trade, 541—his defence of the expedition to Holland, 573-his administration, 576—his great power, especially in Scotland, ib.—his defence and management of the French war, 577 charges of malversation against him, 599-his trial, 600-his services to the navy, VIII 86-his monument in Edinburgh, 406-his connection with Pitt, XVII. 730, 742-his motion on slavery, XX. 322

(General), experiments by, in fir-ing at iron plates, XX. 183.

- (Fort), IV. 300. (Sir J. Deans, admiral), XVI. 107; XIX. 510.

- (Thomas, Lord), steamboat con-

structed for, XX. 637 DUNDER, VIII. 256—taken by Montrose, V. 406—docks of, VIII. 75—linen manu-

facture of, XIV. 285—gloves, X. 682.

(John Graham, Viscount). Graham (John).

Dundonald (Lord), on agricultural chemistry, IL 373.

Dunedin, capital of Otago, XVI. 235.

DUNFERMLINE, VIII. 258—railways connected with, IX. 545—manufactures of, ib., VIL 641.

Dung, use and management of, in agri-culture, II. 294—analyses of different kinds of, 402, 403. See Manure.

DUNGANNON, in Ireland, VIII. 259; XXI. 408-ancient relic near, 409.

Dungaevan, in Ireland, VIII. 259—harbour, XXI. 769—fisheries, 770. Dunino, in Fifeshire, climate of, XIX.

#### DUN-DUP

XVII 459—geology of the neighbour-hood, 456—larch trees at, XVI, 101; XXI, 275.

DUNKERQUE or Dunkirk, in France, VIII. 260—put into the hands of Cromwell by the French, V. 417—sold by Charles IL to France, 422; XII 66—harboun, X. 243-population, 277

DUNKERS, a German sect, VIII. 260 Dunleary, XIII. 94-occasion of the name being changed to Kingston, ib. Dunlin, bird, XVI. 803

Dunlop cheese, VII. 625; IV 333 Dunlop's act regarding reformatories, XVIII. 205.

Dunmanus bay, VII. 371. DUNMANWAY, in Ireland, VIII. 260; VIL

Dunmore, XXI. 750

370

DUNMOW, Great and Little, in Essex, VIII. 260—savings-bank at, XIX. 664 Dunn and Co, their vertical steam-engines, XX. 611 - retort steam-boiler, 615—their upright boiler, 617

Dunn's air-pump, XVIII. 46, n 2

DUNNAGE, VIII. 260
Dunnet Head and bay, VI. 62
DUNNING (John, Lord Ashburton), VIII. 260-his motion in Parliament on the nnfluence of the Crown, V. 489—Horne Tooke's letter to, XXI, 308, 309 Dunnose, XXI, 331, 332.

Dunnottar Castle, XIII. 90.

Dunnoyer (G V), on the alternation of beds of rock, XV 161.

DUNOON, in Argyleshire, VIII. 261; III. 527.

Duniobin Castle, XX. 841.

DUNS (John), Scotus, VIII. 261—doctrines of, I. 325, 434

DUNSE, in Berwickshire, VIII. 261; IV. 679.

DUNSTABLE, in Bedfordshire, VIII. 261straw-plaiting at, IV 568—population, 569—early play-acting at, XXI 164

DUNSTAN (St), archbishop of Canterbury, VIII. 262, 658, 660. DUNSTER, in Somerset, VIII. 263.

Dunsterville's block machinery, IV. 783. DUNUM, VIII 263

DUNWICH, in Suffolk, VIII 263 Duodecimal coinage, XV. 430.

DUODECIMO, VIII. 263.
DUODENUM, VIII. 263—anatomy of, III

Duperre (Admiral), his expedition to Algiers, II 573.

Duperrey (Admiral), his pendulum observations, IX. 578—on the variations of the needle, XIV. 54—on the magnetic equator, 58; I 991-on magnetic intensity, XIV 62. 64.

DUPIN (Louis Ellies), VIII. 263

(Charles), on the character of the British army, III. 667-on the Jesuits in France, X. 223—on English dock-yards, VIII. 79—on the discipline of the British navy, XVI. 108; decrease of sickness in, 106

DUPLE, VIII, 263 Duplex escapement, VII. 33.

DUPLICATE, VIII. 263—in numismatics, XVI. 353. DUPLICATION, VIII. 263-of the cube, ib

DUPLICATURE, VIII. 268, Duponchel (A. J), his entomological

works, IX. 14. DUPONDIUS, VIII. 263; VII. 67.

Dupont (Paul), his hthographic process, XIII. 512.

- (M. H.), his works on insects, IX. 20.

Dupotet de Sennevoy (Baron), magnetic experimentalist, XX. 426, 427—his visit to Britain, 431.

Dupoty (Mons), prosecution of, X. 218. Duppa (Brian), English bishop, VIII. 263. Dupuis (Charles François), VIII. 263

- (Mons.), his mission to Ashantee III. 726.

 (M.), his photographic process, Dunipace, VI 275.

Dunipace, VI 275.

XVII 548.

Steam-engines, XX 612.

Duniveld, VIII, 259—cathedral of, 116;

Duputren (Guillaume, Baron), Flench

Duniveld, VIII. 270.

### DUQ-DUU

surgeon, VIII 264—on erectale tissue, II 799—on the capillaries of the bones,

Duquesne (Fort), XXI. 745, 746.

DURA MATER, VIII 264; III. 56, 105—
abscess of the, XX. 827

Durability of building stone, XX. 712tımber, 166

DURANCE, river, VIII. 264 DURANDUS (Gulielmus), VIII. 264. DURANDUS (Gulielmus), VIII. 264; XIV

727, 718 DURAZZO, in Albania, VIII. 265; IX. 274 D'Urban, town in Natal, XV. 805

- (Sır Benjamin), XIII. 34 Durckheim (Stiaus), on insects, IX. 41,

62—on the mollusca, XV 319 Drnen, in Rhenish Prussia, VIII. 265. DURER (Albiecht), VIII. 265-his etchings, 800, 809-his system of fortification, IX. 817—his house at Nuremberg, XVI 394—his merits as a painter, XVII 74-his improvements in wood

engraving, XXI. 903. Duresse, in law, VIII. 265

D'URFEY (Thomas), VIII 265. DURHAM, county palatine of, VIII. 265--breed of cattle, 267-population and

value of property, 754
—— city of, VIII 268—cathedial library at, XIII. 394—university of, XXI 471—mustard, XI. 744—diminished mortality in, owing to sanitary improve-ments, XIX. 604.

— (Earl of), appointed governor of Canada, V 666; VI. 159.

- in Australia, IV 278, 282. DURLACH, in Baden, VIII. 268 Durmast oak, XXL 270

DUROTRIGES, ancient British people, VIII.

Durra or dhourra, species of grain, III 344; II. 55; XV. 17, 348; XVI 348, XX. 52

DURRESTEIN, in Lower Austria, VIII. 268. DURSLEY, in Gloucester, VIII. 268

Duruy (M.), on the character of the Romans, XIX. 308. DURY (John), VIII 268. Duschan (Stephan), XX. 62 Dussara, in Hindustan, VIII 269.

DUSSAULX (Jean), VIII. 269
DUSSELDORF, VIII. 269—school of painting at, III 719-government of, XIX. 145

Dussumiera, genus of fishes, XII. 251 Dust or Dustee, Persian river, VIII. 269. unwholesomeness of, XIV 442, 443

Dust-ball, disease in cattle, XXI. 568. Dust-brand, a disease in wheat, V. 172 Dust-storms, XIV. 685.

Dutch. See Holland. - gold, VIII, 269 school of painting, XI. 591; III.

711; XVII. 74 weight, XXI 809

- West India Islands, XXI. 837. DUTENS (Louis), VIII. 269 Dutiron (Abbe), on optics, XVI. 590, n., 591, n. 2.

DUTKA, wind instrument, VIII 270 Dutour (M.), on the colour of mixed plates, XVI. 623

Dutrochet (M,), on the cause of the ascent of the sap in plants, VIII 603—on the capillaries, II 799—on the skin, 834 on endosmose and exosmose movements in the sap of plants, XII. 102; V. 68—on the heat of plants, 169.

Dutteah, V. 763. Duty, XV. 564 et seq -collision of duties, 571—the economists on, VIII 376 maladies exempting from public, XIV 426-duties of parent and child, XVII. 274, 276, XV. 568.

- in commerce, VIII. 270duties, IX. 448; XXI 59—on tea, 70, 89, 90—spurits, 73—license duties, 69—foreign duties on herring, IX. 641, n. 2—on paper, XVII. 260. See Customs,

- meaning of the word as applied to

### DUV—EAD

Duval (M.), on the structure of teetl., XVL 410, and n 1. (Jacques), his work on insects, IX.

Duverney (M), his anatomical discoveries,

Duvillard (E E), his tables of mortality, XII. 400

Dwale, in heraldry, VIII 270 DWARACA, in Hindustan, VIII. 270. DWARF, VIII 270.

DWIGHT (Timothy, DD), VIII 271the utilitarian theory in morals, XV 553, 554

DWINA, or Dvina, two Russian rivers. VIII. 271; XIX. 516, XXI 398, 608. See Duna.

Dyaks, people of Borneo, V. 49, 50 Dyasteridæ, echinoderms, XXI 991.

Dycoteles, genus of mammalia, XIV. 197. Dydimus of Alexandria, IV 779

DYEING, VIII. 272—Chinese skill in, VI. 586-of fishing lines, III 151-of ivory, XII 664—of beaver hats, XI 242—of leather, XIII. 310—Berthollet's work on, IV 677—Mr J. Wilson's improvements in, VII 441—in Gloucestershire. X. 681 See Dyestoffs

DYER (Sir James), VIII 320
———— (Mr), on the university of Oxford, XXI 460, n, 461

(John), English poet, VIII 820; XVIII 124.

Dyers, diseases of, XIV. 443. Dyers'-broom, a dyestuff, VIII 297

Dyestuffs, VIII 282-red, ib -yellow, 295, 318—blue, 301—black, 304—brown, 306—green, 309—of Haytı, XI. 254—imports of, into the United Kingdom, VIII 734 -for beaver hats, XI. 242-Tyrian dye, XXI. 406-of Honduras, XI. 612 See

Anotta, Cochineal, &c. Dyke. See Dike or Dykes. DYLE, Belgian river, VIII 820; IV. 611.

Dynames, VII. 304. DYNAMETER, VIII. 320. DYNAMICS, VIII 321; I. 718, 721—dyna-

mical stability, XX. 152, 156—applied dynamics, XIV 402—of phrenology, XVII 560—social, XIII 263—dynamical theory of heat, XX. 561 See Motion, Statics.

DYNAMOMETER, VIII 365; XIV. 404—marine, XI 216, XX. 645—friction,

Dynasties, Egyptian, VIII. 452 et seq.table of, 453.

Dynops, genus of mammalia, XIV. 148. DYRRHACHIUM, VIII. 365, 265; IX 274siege of, in 1077, VII 316-coins of, XVI. 370.

Drs.m., goddesses, VIII. 365.
Drs.arr, VIII. 365 — chalybeate spring near, IX. 544. Dysclasite, mineral, XV. 76.

DYSCRASY, VIII. 365. Dysdera, genus of arachnides, III 378. DYSENTERY, a disease, VIII 365-common

in Egypt, 423, successful mode of treatment there, 1b—in sheep, XXI. 568. Dysluite, mmeral, XV. 87, 108. DYSOREXY, VIII 365.

DYSPEPSIA, VIII. 365 DYSPNGA, VIII. 365; XVII. 663 Dytalus, genus of insects, IX 133. Dytiscus, genus of insects, IX. 100. Dyvour, in Scotch law, VIII. 365. Dzerin, kind of antelope, XIV. 210. Dziggithai, in zoology, XIV. 200

### $\mathbf{E}$

E, letter of the alphabet, VIII. 866; II. 610-in abbreviations, 18. EACHARD (John), English divine, VIII.

366. (LAURENCE), English historian,

VIII. 366. EADMERUS, or Eadmer, English historian, VIII, 366.

#### EAG—EAR

EAGLE, a constellation, VIII 367; IV 80 base Irish coin, VIII 367. bird, VIII 366, XVI 742; XVII 633-its power of fasting, III. 180 coin of United States, XV 442

in heraldry, VIII. 366-orders of knighthood, 367

(Thomas), tea advertised by, in 1680, XXI 89 Eagle-ray, fish, jaws and teeth of, XVI

423 See Mylobates
EAGLE-STONE, VIII 367; IL 189.
Eagle-wood, XVII 568; XX 233
Eagleshey, one of the Orkney Islands,

XVI 718, 719

Eaheinomawe, IV. 266, XVI 232 EALDERMAN, among the Saxons, VIII

Ealred, English historian, II 429 EAR, VIII 367; XVII 678, 679-muscles of, III. 39—anatomy of, 45—compara-tive anatomy of, 98—in the mammalia, XIV 133—pain of, in diving, VIII 60—of fishes, III 178, XII. 220—diseases of, in the domestic animals, XXI, 578 -musical, VIII. 367; XV. 703. See

Ear-trumpet, II 106 See Hearing-trum-

pet Ear-wax, III 46 EARING, sea term, VIII 367 EARL, British title, VIII 367-colonet of an. XI 336

- MARSHAL, VIII. 367; XIV 318 Earle (Bishop), his description of a scepnc, I 51.

Earn, river and loch, XVII. 456. EARNEST, VIII. 367.

Earnshaw (Thomas), his chronometers,

VII 30, 34 EAR-RING, VIII. 367 Ear-shells, XV 380

EARTH, VIII 367—speculations as to its internal structure, I. 791—its annual motion round the sun, II 36-discovery of the nutation of its axis, III. 805 measurement of the, ib.; VII. 230, 700 I. 617 et seq., 836 et seq; III. 812; V 243—its motions, IV. 3—form, 5; IX 547; X. 479, XVIL 569-ellipticity, I 854, 815—magnitude of, 617; IV 6; IX 547; X 465—weight, XVII 569—density of the, I 834; XV 166, n, XVII 569—Cavendish's experiments on its density, VI 353; I 834—date of its creation, VI 668, 677—rotation of, as demonstrated by Foucault's pendulum experiment, I. 854, 855—heat of 949-radiation of, XIV 644-effects of the sun's heat on, I 950-total quantity received by, from the sun, ib.nutation of its axis, IV. 15-motion of its translation, 20-effects of its motions on the appearances of the planets, -variations of its oibit, 106-final conflagration of, VII. 241—magnetism of, I. 990; XIV. 49; XVII. 617, its intensity, XIV 59; nature and causes of its magnetism, 63, 64—internal heat of, 636; XV 184, XVII. 570—use of the pendulum in determining its gravity and oblateness, 384-its surface and general divisions, X. 483materials of which it is composed, their arrangement, &c; see Geology-its suiface, productions, and phenomena, see Physical Geography - electricity of, XXI. 116 — words denoting earth, in different languages, XIII. 199 See Figure of the Earth.

Earth-stopping, in hunting, XII. 38
Earth-worm, XI. 301—hermaphrodite
nature of, III. 171—as a bait, 155—

effects of chloroform on, VI 631.

EARTHENWARE, VIII. 367; XVIII. 430 et seq.—manufacture of, in England, VIII. 732—Staffordshre, XX. 530.

EARTHQUAKE, VIII. 368, XVII. 616—earthquakes near Ætna, II. 194—at Antoch III. 373, 374, av the Arguer IV. taoch, III. 273, 274-in the Azores, IV 386, 387—at Calacas, VI. 227—in Chile, 543—in China, 582— Comrie, in Perth-shire, XVII. 616—Ionian islands, XII.

### EAR-EBN

444, 455—Jamaica, 673—Japan, 689— Lasbon, XIII 505, X. 695, XVIII 386 -Luzon, XIII 742-Merida, XIV 542 -Norway, XVI 322-Quito, XVIII 73S—Smyrna, XX. 364—Sparta, 501 regions exempt from, XVIL 616-waves produced by, 582.

EARTHS, in chemistry, VIII. 368; VI 486, XV. 65—as alimentary substances.

Earthworks, on railways, XVIII 759 Earthy poisons, XIV. 434. Earwash, river, VII. 754—canal, ib Earwig, IX. 155-methods of destroying

ıt, XXL 549 EASDALE, island, VIII 368—its roofing-slates, IIL 526

Ease, sea term, VIII. 368 EASEL, VIII. 368—easel-pieces, ib. EASINGWOLD, in Yorkshire, VIII. 368. EAST, VIII. 368.

EAST INDIA COMPANY, VIII 368, XI 238, 481, 485, 486 et seq., 528, XIII 670— outlying territories of, VII. 147—its government of Ceylon, VI 396—parhamentary enquiry in its affairs in 1772, V 475-subsequent proceedings, 776-charges against it, ib-Mr Fox's bill relative to its affairs, 508, XI 496-its misgovernment in India, V. 509, 519; XI. 486, 488-arbitrary conduct of its servants, 487; their malad-ministration, 488—Mr Pitt's bills, V 511, 513, 514; XI 497; XVII. 732 Grant's act in 1833, XL 528-Mr Francis's bill, V. 520-dispute with government in 1788 about the payment of soldiers sent to India, 528-Burmese war, 646, 783; XI. 508-its internal policy in the government of the country, 510—renewal of its charter in 1793, V. 549-abolition of its charter, as a trading monopoly, VIL 437; XL 528; V. 612-its present constitution, XI, 529exportation of bullion by, XVIII 215its shipping, XX. 134—quantity of teasold by, XXL 71—their first importation of tea, 89—summary of their tea-trade, 90, 91, cessation of their monopoly in, 90-attack of the weavers on the trade of, 781-school at Hertford, XT. 358.

- (Dutch), XI 583, 584. East India Docks, VIII. 75; XIII. 661. - House, London, XIIL 670.

East Indians, XI 467
East Indians, commerce of, III. 757; X. 259—manufacture of cotton in, VII 436-coms of, XV 442, 445. See India. Hindustan.

EASTBOURNE, in Sussex, VIII 368 EASTER, VIII. 368, I. 502-disputes about the time of observing, VI 80; I 525determination of its date, VI. 86—Easter term at Oxford, XXI. 458.

island, XVIII. 281-peopling of, TI 694.

Eastern (The Great) steamship, XX. 29, 139, 164, 665-comparative size of, 641, Easton, in Pennsylvania, VIII. 368. EASTPORT, in Maine, VIII 368 Eastwick's volcanic battery, XXI 610. Eaton (John), his visit to the Ladrone Islands, XVIII. 269

Eau de Brinvilliers, a poisonous liquid, III. 330.

- DE COLOGNE, VIII. 368; XVII. 409

-dustlenes of, XVIII 669

DE LUCE, VIII 368—as a remedy for the bite of serpents, XIX. 46

EAVES, in architecture, VIII 368. EAVES-DROPPER, VIII 368. EBDOMARIUS, or Hebdomarius, ecclesias-

tical officer, VIII. 368. ERDOME, Spartan festival, VIII. 368 Ebenaceæ, nat order of plants, V 198 EBERHARD (Johann Augustus), VIII. 368. Ebersberg, tattle of, X. 151.

EBINGEN, IN Wittemberg, VIII. 269.
EBINGENTES, religious sect, VIII. 369opinions of the, XII 764

Ebn Jounis, Alabian astronomer, III. 795 - Sina. See Avicenna.

### EBO—ECL

EBONY, VIII. 369, V 199-specific gravity

older of plants, V. 198. EBORACUM, ancient name of York, VIII. 370; XXI. 955

Eboulement, III 130

EBRO, Spanish river, VIII 370; III. 393, XVII 605, 646, XX. 487 Ebsamboul. See Ipsamboul. EBUDÆ, or Hebudes, ancient names of the

Hebrides, VIII 370 EBULLITION, VIII. 370-produced by the

application of cold, XX. 556. See Boilıng Eburna, genus of mollusks, XV 287.

ECASTOR, of Mecastor, an oath, VIII 370 ECATEA, VIII. 370 ECBATANA, city in Media, VIII. 370, XIV.

ECCENTRIC, VIII. 371-rod in steam-engines, XX. 584 et seq.

Eccentricity of the solar orbit, discovered by Hipparchus, III. 791.

ECCLES, in Lancashire, VIII. 371. ECCLESALL-BIERLOW, in Yorkshire, VIII. 371

ECCLESHALL, town in Stafford, VIII, 371. ECCLESIA, VIII 371

ECCLESIASTES, Book of, VIII. 371. Ecclesiastical, VIII. 372—academies, II. 62—calendar, VI 79.
—— Titles Bill, V. 672

Ecclesiasticus, Apocryphal book, VIII. 372

Eccoprories, medicines, VIII. 372. Ecdici, VIII 372. Ecdysis, IX. 57.

ECHELON, VIII 372 Echeneidiæ, family of fishes, XII. 271 Echeneis, genus of fishes, XII. 270, 271 Echidna, genus of mammalia, XIV. 193; TV 260.

Echimys, genus of mammalia, XIV. 180
—fossil, XVII 173

ECHINADES, islands, VIII. 372. Echinai achnius, XVII 100 ECHINATE, or Echinated, VIII 373 Echinida, XXI 984, 987, 991. Echinidæ, echinoderms, XXI 984-fossil, XVII. 99.

ECHINITE, fossil, VIII. 373 Echinococcus, genus of entozoa, XXI. 978 ECHINODERMATA, VIII. 373; III. 192,

XXI 983—fossil, XVII. 98. Echinoidea, fossil echinoderms, XVII. 99. Echinolampas, fossil echinoidea, XVII. 100 Echinoporinæ, zoophytes, XXI 1005. Echinops, dentition of, XVI. 452 Echinopsis, fossil echinoidea, XVII. 100. Echinorhinus, genus of fishes, XII 325. Echinorhynchus, XXI. 980

ECHINUS, VIII. 373; XXI 987 et seq. in architecture, VIII 373; III. 509 Echiopsis, genus of fishes, XII. 233.

Ecmopais, genus of Insues, All. 255.

Ecmo, VIII. 373—cause of, II. 99, 106

in music, VIII. 378

in architecture, VIII. 373

Eckart (Master), his mysticam, XV. 756. ECKERNFORDE, in Denmark, VIII 373 Eckhel (Joseph), on ancient coins, XVI. 360, 384,

Eckius, or Eck (Joannes), VIII. 373 his disputations with Luther, XIII. 726. ECKMUHI, in Bavaria, VIII 373-Davoust at, X. 151.

Eclampsia, disease, XVII. 700.
Eclampsia, disease, XVII. 700.
Eclampsia, VIII. 378
Eclampsia, VIII. 374—eclipses of the moon,
IV. 45—of the sun, 47—of Jupiter's satellites, 70-number of, in a year, 49 —list of solar eclipses visible during the present century, 50—tables for the calculation of lunar, 120—projection of lunar, 134, 141—elements for the projection of solar, 138-Captain Cook on an echpse of the sun, VII. 340—mode of finding the longitude by lunar, XIII. 688-by the eclipses of Jupiter's satellites, ib .- of the sun, 689-echpse of the sun in 1748, 332,

ECLIPTIC, VIII. 374, IV. 12; X. 481-its

### ECL—EDI

obliquity, IV 12-displacement of the,

Eclogite, rock, XV 155 Eclogue, in poetry, VIII. 374—Vngl's eclogue, XXI 594

ECLUST, VIII 274. See Clusius Ecole Polytechnique, X 272

Economic geology, Muscum of, XXI 323 Economist newspaper, XXL 875 ECONOMISTS, VIII 374, I 183: XVIII. 220, 222, 231—works published by, 2.2.

n. 2—their objects and motives, 750 Economy (Political), VIII. 386. See Political Economy.

ECSTACY, VIII. 386; XVII. 790. ECSTATICI, diviners, VIII. 386 ECTHESIS, VIII. 386

Ectopistes, genus of birds, XVI 794 Ectot (Manouri d'), his Danaide wheel, XII, 171

ECUADOR, VIII 386-metallic produce of, XV 248

Edaphodus, genus of fossil fishes XVII. 119

Edaphrodon, genus of fossil fishes, XII. 342

EDDA, VIII. 388; XV. 767; XVIII. 808 Ed-Dırécych, VIII. 494 See Denaych. Eddystone lighthouse, XIII. 464, III. 491

-erected by Smeaton, XX. 325

- (Sir F M), quoted, VII. 374, 375,

376, n-his work on the poor, XXI 680. EDENDERRY, in Ireland, VIII. 389 EDENTATA, order of mammaha, VIII. 389:

XIV. 189, 135, XVII 631-fossil. 638; II. 774-their bones, III 76 et seqorgans of smell, 94—ears, 99—intestines, 110—of Africa, IL 217—of America 713. EDER, town in Hindustan, VIII 389.

EDESSA, in Macedonia, VIII. 589 - in Mesopotamia, VIII 389, XIV.

EDFU, VIII 389-temple of, III. 458; VIII. 513; XI 382, and n 2 Edgar, king of England, VIII. 659—his fleet, XVI. 89; XX. 119.

Atheling, VIII 663, 668, 670, XIX. 746, 747

king of Scotland, XIX. 749
Edgbaston, IV 729—botanic garden at,

Edgehill, battle of, V. 403. EDGEWARE, in Middlesex, VIII. 389 EDGEWORTH (Maria), novelist, VIII 389on Miss Hamilton's Letters on Educa-

EDHILING, Anglo-Saxon title of nobility, VIII. 390

VIII. 390

EDICT, in law, VIII 390.

EDICT, in law, VIII 390—works for supplying it with water, III. 337, XII. 185—Crawley springs, III. 387; VIII. 405—study of mathematics at, I. 807—abattor in, II. 11—Royal Observatory of, III 818—Asylum for the Deaf and Dumb, VII. 686—Asylum for the Blind, IV. 776—Bible Society, 704—ale, V. 334—fall of rain at, VIII 409—School of Design, VII 758—excellence of its guis and rifles, -excellence of its guns and rifles, XI, 101-hackney coaches first established in, VII. 42—Cromwell in, 512, 513—products of the gas-works of, X.
433—hbraries in, XIII. 400 et seq chnical medicine at, XIV. 462—resistance to Episcopacy in 1637, V. 394 siege of the Castle in 1689, 440-anti-Catholic disturbances in 1779, 491political prosecutions in 1793-94, 550-Colleges of Physicians, Surgeons, Jus-VII. 114-professorship of civil law, 585-irrigated meadows near, XII. 620; VIII. 409—leper hospital, XIII. 340—Philosophical Journal, XII. 685 police of, XVIII. 204-post-office, 416-Edinburgh and Glasgow Union Canal,

XIII. 498—university of, XXI. 481—medical school of, 484; XIV. 466—ex

#### EDI-EDU

hibit.ons of the Royal Academy, IX. 453—gazette X. 444—early newspapers of, XVI 184—school of painting in, XVII 81-early printing at, XVIII 532—earthen mound, 761—tunnel under, ib —founded by Edwin, Saxon chief, XIX. 743 -establishment of saving banks in, 656; then management, 668 -dome of the Register Office, 388-list of societies in, XX 368-stone chiefly used in building, 711-Scottish Indus-

trial Museum at, XXI 324 Edinburgh Review, XIX 100—origin of the, XX. 349 : XII. 716—Empson, editor and contribution to, VIII. 652—on salmon-fishing, IX 608, 614—on the character and genius of Dryden, VIII. 204—on the radius, III 577-on Greek arithmetic, 578—on palimpsests, IV 705—on Hindu literature, V 270—on Machiavelli, XIII 778—on the intellectual character of Sir J Mackintosh, 786 on the franchise, X. 738-on the charac ter of Grattan, XI 3-on Norway, XVI. 302—on the dependence of different branches of industry on each other, XVIII 237 - Constable's connection with, VII 299-its influence on public opinion, 718—Jeffi ey's editorship, 717— Macvey Napier editor, XV 778—Sir J Leslie's contributions to, XIII 346-on railways, 797-Sır Walter Scott an occasional contributor to, XIX, 582-Sir J Mackintosh's contributions to, XIII 786 -Sydney Smith's connection with, XX. 349-Dr Adam Smith's contributions to,

339, 345, Spalding s, 495, 496. Edinburghshire, VIII 408—flars prices m, IX 533-analysis of the soil of, II 393—agricultural statistics, XIX. 796, 797, 798—population, 799—trigonometrical survey of, XXI 333.

Edingtonite, mineral, XV. 77 Editha, queen of Edward the Confessor, VIII. 662.

Editions of books, IV 707. Edmondia, fossil mollusks, XVII 105, 108 Edmonton, in Middlesex, VIII 411. Edmund, king of England, VIII. 658. - Ironside, VIII 662 Edolius, genus of birds, XVL 751 Exon, or Idumea, VIII. 411; XII. 357 Edred, king of England, VIII. 658 Edriophthalma, crustacea, VII. 542—th nervous system, 538.

EDRISI, Arabian geographer, VIII. 411
EDRIGATION, VIII 412—its effects used as an argument against free agency, I 269 -study of medicine fitted to develop the intellect, 101-of farmers, II. 366effects of, on taste, IV 545—Brougham's education bill in 1821, V. 630—its importance in a manufacturing country, VII. 457—the economists on, VIII 379 —study of natural lustory, IX 26— Fellenberg's system, 500; Pestalozzi's, XVII. 478, 479, Lancaster's, XIII. 181 —promoted by the Jesuits, XII. 754—theological, XVIII. 494, 495—philology a necessary branch of, XVII 538—p10 portion of married people in England who can neither read nor write, XVIII 873; in France, ib -views of Bacon on, I. 38; Locke, 267; XIII. 548; Aristotle, III. 588; Mikton's work on, XV. 25; Parr's, XVII. 305—Plato on, 809, 812—schools as affecting health, XIV. 444—Hannah More's works on, XV. 580 in Afghanistan, II. 205—Armagh, III. 614—Austria, IV. 318—Australia, 291— Bavaria, 519—Bengal, 652—Birmingham, 731—Bogota, 811—Bolivia, 829—Brazil, V. 297—Calcutta, VI. 70—Canada, 157—Carlow, 240—Cavan, 348—Chile, 546—Circars, 730—Clare, 755— Connecticut, VIL 295-Constantinople. 802—Cork, 372—Crete, 496—Denmark, 750—Donegal, VIII. 104—Down, 122—Dublin, 215, 222, 223—Egypt, 445—England, 745—Florida, IX. 668—Fermanagh, 515—France, X 268—Genoa, 453
—Germany, 591—Glasgow, 652—Cape
of Good Hope, 715—Greece, XI 20—

#### EDU-EDW

Hanover, 213 - Hindustan, 531-Holland, 589-Hungary, XII. 18-Iceland, 199—Illinois, 362—Indiana, 374—Ionian Islands, 447—Ireland, 533, 534—Italy, 661—Jamaica, 676—Japan, 695—Kentucky, XIII. 70—Kildare, 82—Kilkenny, 85-King's County, 91-Kirkcudbrightshire, 100, 101-Lancashire, 180-Leeds, 314-Leicestershire, 321-Leitrim, 328 -Limerick, 488-London, 666-Lombardy, 647-Londonderry, 682-Longford, 684—Louisiana, 700—Louth, 702— Madeiras, 797—Madrid, 805—Isle of Man, XIV 246—Manchester, 258— Maryland, 331 - Massachusetts, 341-Mayo, 370—Meath, 376—Mexico, 718—Monaghan, XV 410—Morocco, 595— New Brunswick, XVI 164-New Hampshire, 174-New Jersey, 176-New Orleans, 177 - New York, 220, 229-Norway, 331—Nova Scotia, 344—Ohio, 490—Paris, XVII 284—Pennsylvania, 398-Persia, 429-Peru, 474-Petersburg, 491 — Portugal, XVIII. 396 -Queen's County, 728—Roscommon, XIX 421—Sardinia, 639—Scotland, 801, VIII. 747; I 249-Two Sicilies, XX. 255-Sligo, 330-Sweden, 866-Spain, 492-Sparta, 503 — Tennessee, XXI. 156— Tipperary, 286—Turkey, 381—Tyrone, 407—United States, 423—Venezuela, 537—Virginia, 599—Waterford, 769— Westmeath, 839—Wexford, 846—Wicklow, 859—Wurtemberg, 939 See National Education, Universities, Blind, Deaf and Dumb

Education Grant, VIII. 747, XIX 802. EDULCORATION, VIII. 412

EDWARD, name of several English kings, VIII. 412

- the Confessor, VIII. 662-his character, 663.

the Martyr, VIII. 660.

I., reign of, VIII. 680—his death and character, 681—his fox-hounds, XII 34 - constitution of the Mint under. VII. 74-act for assaying gold and silver, 77-castle of, at Caernarvon, VI. 55—his war with France, X 14—wars with Scotland, XIX. 754; XXI. 686—naval engagement with the French. XVI. 90-Iteland, in the reign of, XII. 469—expulsion of the Jews by, 779.

II, reign of, VIII 681—deposition

and murder of, 682—his constitution of the Mint, VII 74—his treatment of the Irish, XII 470—his invasion of Scot-land, XIX. 755—woollen manufactures ın his reign, XXI 913

- III, 1eign of, VIII 682-Turner on the reign of, 683 — laws regarding the coinage, VII. 77—his wars with France, X. 16 et seq —his treatment of the Irish, XIL 470—his encouragement of chivalry, VI. 622-his fondness for the chase XII. 34—his navy, XVI. 90; XX. 121 his household, XI. 773—woollen manufacture in his reign, XXI 914 - his encouragement of textile industry, 780

IV., reign of, VIII. 691—death and character, 692—his household book, XI. 773—his laws for promoting

archery, III. 425

V., reign of, VIII. 693—Sir Thomas
More's Life of, XV. 582—enactments against vagrancy, XVIII 300

VI, reign of, VIII 706—state of the currency under, VII 72—statutes against forestalling and engrossing corn, 375-religious persecution, 483 the Reformation promoted by, XVIIL 829—naval affairs in the reign of, XX.

son of Alfred the Great, VIII 657.
the Black Prince, VI 614, 621,
VIII. 683; X 17, 18—his expedition to
Spain, XX. 464.

Edwardes (Lieut), his operations in the second Sikh war, XVIII. 693.

EDWARDS (Bryan), historian, VIII. 413.

(Dr W. F.), on the effect of light on the lower animals, XIII. 460; VI.

### EDW-EGY

EDWARDS (George), naturalist, VIII. 412on birds, XVI 728

(George), on blasting rocks in the

bed of the Severn, XVI. 70

(JONATHAN), VIII. 415—his scheme of necessity, I. 148—anticipated by Collins, 1b —moral and intellectual character of, 356—on virtue, XV. 559, makes it consist in the love to being, 561, I 357-on original sin, XXL 205 (Milne), on the mollusca, XV 319

et seq—on fossil corals, XVII 96—on zoophytes, XXI 999, n. 8, 1004 Edwin, or Edwy, king of England, his-

tory of his reign, VIII 658 Edye (Mr), on the weight of timber, XX.

173—his beam, 186 Ercloo, town in Belgium, VIII 417.

EEL, VIII. 417, XII 230—angling for, III 162—as an article of food, IX 764 -bobbing for, IV 800-electrical, see -- DODOMING 107, 1V SUU--electrical, se Gymnotus-nune-eyed eel, XII 228-effects of electricity on, VIII 602-sand-eel, in Lapland, XIII. 242 EFFENDI, VIII 417

EFFERNEL, VIII 417. Efficiency, of a machine, XIV 404—of prime movers, 416

Effic, VIII. 417 Effingham (Lord), V 481 Effichescence, VIII 417; VII. 550. EFFLUVIUM, VIII 417

Effodentia, tribe of mammalia, XIV, 190 Egalité, execution of, X 83 Egbert, king of England, VIII. 656, 657. Egea, deposit of infusoria at, XVII 94

Egede (Hans), Norwegian missionary, XI 39 Eger, in Bohemia, VIII 417.

Swiss lake, XXI 1010 Egeran, mineral, XV. 85 Egeria, Ægeria, nymph, VIII 418; XIX.

- planet, IV. 91. Egerton (Sir P), on fossil fishes, XVII. 116, 125, 126

Egg, VIII. 418-as an article of food, IX 763-modes of preserving eggs, 767; XVIII 815-artificial hatching of, ib quantity imported from Honfleur, XI 615-use of, in clarifying, VI 755pent's egg of the Druds, VIII 188; III 167-eggs of insects, IX. 53-Hewitson's work on the eggs of British birds, XVI 829—test of the freshness of, XVIII 51-fossil eggs, XVII 155

See Ova, Poultry. Egg-apples, V. 201 Echam, village in Surrey, VIII. 418 EGINHARD, VIII 418 See Æginhaid. EGIANTINE, a plant, VIII. 418. Egmont (Count), XI 568 et seq Egnatia, Italian city, VIII 418 EGREMONT, in Cumberland, VIII 418.

EGRET, bird, VIII 418; XVI 799
EGYPT, VIII 419; II 224—physical geo-graphy, VIII 419—chronology and history, 449-topography and monuments, 496—statistics, 515—Dolomieu on the physical constitution of, 95—pyramids of, II. 23; III 437, 451, 457—singing and dancing guls, II 600—Abdallatif's account of, 23 - manufacture of salammoniac, 721—management of bees, IV 587—catacombs, VI. 330—cotton and wool manufacture, VII. 448-mining, 188-cotton-culture, 436-carpets, VI 269-French trade with, X. 259resemblances between ancient Egypt and India, V 271-similarity of its monuments to those of Mexico, XIV 720-Alexander's invasion of, XIII 767-Bonaparte's expedition to, V. 564; X. 109, 119, 120; XV. 791; XXI. 371—Sir Ralph Abercromby's expedition, V. 583, X. 120; II. 29-British invasion in 1807, V. 603-monarchy of, XV 413-information in the Bible regarding, XI. 368
—hieroglyphical symbols of, 392—Dr Young on the monuments of, 404coms of, XVI. 380—plague in, XVII. 748 et seq.; II. 22—Plato's visit to, XVII. 787—vessels of ancient, XX. 117

### EGY—EIM

-conquered by Selim I, XXI. 369-its condition in the second century DC, XIX. 312—Cæsar's campaigns in, 326reduced to a Roman province, 330 weights and measures, XXI 810—map of, VIII Plate. See Egypnans, Hieroglyphics &c

Egyptian Institute, I. 947 thorn, II 58

wheel, XII 69 Egyptians, their skulls, III 29 - their veneration for the dog, 288; XI. 763, cat, XIV 170, crocodile, VII 506, ibis, XVI. 801-were ignorant of the aich, III 401-then architecture, 400, 434, 457 -army, 620-geographical discoveries in Asia, 752-astronomy, 782-versions of the Bible, IV 700—religion, 217, VII 711, 694, XI 410, XII 666—didthey borrow their superstitions from India? V. 271; XIII. 194-their beer, 318-bricks. 342; XVIII. 520-calendar VI 76 et seq, 670, 672, III 783-castes VI. 314 -the Chinese not descended from, 557 - practised circumcision, 732 - used coffins, VII. 55—their mode of cooling water, 100 - gnomons, 773 - dyerng, VIII 272-calico-printing, 314-divination, 54—embalming, 643—hierogly-phies, XI 368, II 606, V. 10—lan-guage, XI 409, 412; XIII 218—their treatment of the hair. XI 182-funeral rites, X. 343-their knowledge of geometry, 497—glass-making, 657—ninga-tion, XII 621—railway biidges, 609 the notion of their Indian origin, XIII. 194—their physiognomy, 218—locks, 533—libraries, 381—resemblance to the ancient Mexicans, XIV. 720, 721-their knowledge of medicine, 450-mysteries, XV. 752-mythology, 760, 764-navigation, XVI 1—Osuis, XVII 4—paintings, 46—paper, 246—papyrus, 262—their supposed resemblance to the Chinese, 354 — exports of the precious metals to, XVIII. 468—sculpture, XIX. 848; VIII. 170-their version of the Scriptures, 839-acquaintance in ancient times with the power of steam, XX. 573—surgery, 809, 811—masonry, 710—ancient weights, XXI 806—ancient wines of, 882—Egyptian dictionary, 965 Ehlite, mineral, XV 104

Ehrard's burning mirrors, VI. 11. Ehrenbeig, summary of his views of infusona, III 206, 208; XIII. 163-his arrangement of these animals, 211-on the brain and nerves, II 808—on the brain, 820, 821—on the development of living organisms in the an, III 210on infusorial organic remains, XIV. 805; XVII. 94, 95—on a species of Medusa, XXI 997—on polypes, 1002—

on corals, 1004, n. 1. EHRENBREITSTEIN, IN Rhenish Prussia, VIII. 518, VII 46

Ehretiaceæ, nat order of plants, V. 201 Ela, or Ey, VIII. 518.

EIGETÆ, sect of Syrian monks, VIII 518 EIGHHORN (Johann Gottfried), VIII 518 on the authorship of the Epistle to the Hebrews, XI. 277, 278—on the recension of the New Testament text, XIX. 836

on the book of Revelation, 99
Eightsadt, town of Bavaria, VIII. 518
Eider, or Eyder, river, VIII. 518—its
connection with the canal of Kiel, VII

EIDER-DUCK, VIII. 518; XVI. 817; XVII. 634—down of, VIII. 518—of Iceland, XII. 203

EIDOGRAPH, VIII 518; VI. 119; XVII. 238 Eifel group of rocks, XV 199. Eiffe's compensation-balance, VII. 30.

EIGNE, VIII. 519. Eikon Basiliké, authorship of, X. 440;

VIII 263, XV. 26. EILAU-PREUSSISCH, Prussian town, VIII. 519

EILENBURG, town in Saxony, VIII. 519. Elethyas, remains of, VIII. 513. EIMBECK, or Einbeck, in Hanover, VIII.

#### EIM-ELD

Eimeo, island, XVIII. 280 Einhoff, on the composition of baileyflour, V 320 EINSIEDELN, town in Switzerland, VIII. 519; XIX 733 EISENACH, in Germany, VIII. 519; XIX. Eisenapatit mineral, XV. 101 EISENBERG, in Germany, VIII. 519; XIX Eeisennickelkies, XV 116. EISENSTADT, in Hungary, VIII 519 EISLEBEN, town in Saxony, VIII 519. EISTEDDFOD, assemblies of Welsh bards, VIII 520 EJECTMENT, in law, VIII. 520. EKATERINEBURG, in Asiatic Russia, VIII EKATERINOSLAV, or Yckatereenoslaff, in European Russia, VIII 520, XIX. 521 EKRON, in Palestine, VIII. 520, XVII 182, 514 El-Adid, king of Egypt, VIII 479. Elæagnaceæ, nat order of plants, V 205 Elæolite, mineral, XV 73.
ELÆOTHESIUM, VIII. 520; IV. 505; XL. Elagabalus, Roman emperor, XIX. 347. ELAINE, VIII 520; IX 757; XVI 492-one of the components of fat, II. 788. ELAM, VIII. 520. El-A'mir, king of Egypt, VIII. 479. Elanus, genus of birds, XVI 743 ELAPHEBOLIA, Greek festival, VIII. 520. ELAPHEBOLION, the ninth Athenian month, Elaphrus, genus of insects, IX. 98 ELAPS, genus of snakes, VIII. 520; XIX 64. Elapsopsis, genus of fishes, XII 233 Elasmodus, genus of fossil fishes, XII 342, XVII 119 Elasmotherium, fossil mammal, XVII. 178. ELASTICITY, VIII 520—a property of all bodies, IL 100; XX. 749—of aeriform fluids, XL 270—of heat, I 767—of air, XVIII 23, 30, 50, 58, 61—modulus of, L 874; IL 101; in various woods and metals, VI. 251—of timber, XXI 274, 275—motion of elastic fluids, XVIII. 68—Bernoulli's problem of the elastic curve, XX. 762, leading properties of that curve, 1b -elastic force of steam, 557—experiments on, ib, 558 et seq ELATEA, town of Phocis, VIII. 520. Elater, genus of insects, IX. 106. Elaterides, family of insects, IX. 105-in Jamaica, XII. 682. Elaterite, XV. 124. Elaterium, in pharmacy, VIII. 521. Elaters, in the hepaticæ, V 146. ELATH, city of Idumæa, VIII. 521 See Akabah. Elatinaceæ, nat. order of plants, V. 184 El-Azhar, Egyptian university, VIII 487, 447 ELBA. VIII. 521-iron mines of, IX. 359: XXI 393—tunny fishery, 394—Napo-leon banished to, X 169, XV 795. Elbe, river, VIII. 521, X 582, 585; XI 211; IX 384, 385; XVIII 605, 646, XVIII 662; XIX 684, 687—corn-trade of the, VII. 403

ELBERFELD, in Rhenish Prussia, VIII.

El-Burullus, Egyptian lake, VIII. 429 Elburz, or Elbrouz mountains, XIII. 78;

ELCESAITES, Jewish-Gnostic sect, VIII

ELCHE, Spanish town, VIII 522. ELCHINGEN, Bavarian village, VIII. 522-

Elcho (Lord), his registration bill, XVIII.

ELDER, Jewish, VIII. 522-of the primi-

tive church, L 487, 502, 512; XIL 371

-in Presbyterian churches, XVIII.

tree, V 195, XVII 764-specific

ELBEUF, French city, VIII. 522. ELBING, Prussian town, VIII. 522.

XVII. 592, 597, 599, 643.

Elbow-joint, III. 34.

battle of, X. 137

521.

522

840.

480, 484,

ELD-ELE gravity of the wood, XII 89—cells of, V 65 Elder (Randolf) and Co, their combined cylinder steam-engine, XX. 647. ELDORADO, VIII 522 Eldred on gunnery, XI, 103. ELEATIC PHILOSOPHY, VIII. 522 ELECAMPANE, plant, VIII 522. Elecate, genus of fishes, XII. 297. ELECTION, VIII. 522 - parliamentary, XVII 296—bribery at elections, V 342—in theology, XXI 215 ELECTIVE AFFINITY, VIII. 522-franchise, X. 285, 738, Electric battery, VIII 611; XXI 99
— bells, VIII 537, 550; IV 630
— clocks, VII 27; I. 986; XXI 644 current, XXI. 100 and n. 1-weak do, 632. eel. See Gymnotus. figures, VIII. 606 jar, VIII. 611—construction and action of, 1b - kites, VIII 608. - light, I. 924 shock, VIIL 601, XXL 609, 646of fishes, XII 133, 261. —— spark, XXI 610, 653. TELEGRAPH, VIIL 627. See Tele-Electrical machines, VIII. 535, 536, 603 Van Marum's, 538 -for medical purposes, 603 - on the construction and use of, 605-Sir W. Snow Harris's, 604, Hare's, 1b , Walkiere de St Amand's, 605; Ingenhousz's, ib ELECTRICITY, VIII 523—history of, ib.; I.

660, 783-connection between it and magnetism, 800-phenomena and laws of, VIII. 535—on the electricity produced by heat, pressure, and separation of parts, 557; and by change of form, 565 -changes produced by it on organic and inorganic bodies, 588-contributions of Æpinus to, II 163-conduction and induction of, I. 978 - observations of Gay-Lussac and Biot in a balloon, IL 182—Beccaria on, IV 560 — Canton's discoveries, VI. 201—Cavallo on, 345 animal electricity, I. 959, 960, 961, 988—Cavendish on, VI. 351—electrical theory of chemical attraction, 450atmospheric, I. 962; XIV. 660—Coulomb's memoirs on, VII. 462, 463— Franklin's discoveries, X. 291-its effect on fermentation, V. 319, 329; on beer, 330-used to produce mechanical ener-330—used to produce mechanical energy, XIV. 418—of fishes, XII 133, 261; XVII. 671—of plants, V. 170—of minerals, XV. 59—quantity discharged during thunder-storms, XIV 663—use of gutta percha in electrical experiments, XI. 163-mathematical theory of, L 987-distribution of, ib, 988-its use in resuscitating drowned persons, VIII. 183—nervous power not identical with, XVII 671—Priestley's history of, XVIII. 514—ordinary and voltaic electricity, difference of, XXI. 621—its influence on health little known, XIX. 608its supposed agency in the Deluge, VII. 721 - its influence in the formation of clouds and rain, 39-electrical action, in reference to electric telegraphs, XXL 94-therapeutic effects of, 635light and heat by means of, 637. Electrices, islands, VIII 628

mical origin of galvanism, I. 964-chemical effects from the pile, 965-electrochemical theory, 968—electro-chemical decomposition, 978. See Voltaic Electricity. Electrograph, Ronald's, VIII. 626.

Electro-chemistry, Sir H. Davy's discoveries in, VII 668 et seg —on the che-

Electro-magnetism, I. 973—discovered by Professor Oersted, VIII. 581, 600; L 973; XXI. 638—details respecting its discovery, I 973 - Ampère's electrodynamic theory, 974; XXI. 638-various opinions on the nature of the

### ELE—ELE

electro-magnetic force. I. 974-mutual action of electric conductors, 975electro-magnets, XIV. 74-influence of, in producing double refraction, XVI. 674; on the axis of crystals, ib; L 981 -electro-magnetic rotations, 975, 977as a prime mover, 987-Arago on, XXI. 638, fundamental experiments in, 638, rotations, ib; inductions, 639-electro magnetism as a mechanical power, 641. Electro-biology, XX. 441.

Llectro-dynamic machines, I 987-Ampere's, XXL 639; Marsh's improvement on, ib.

Electro-gilding, X. 626; XXI. 637. Electro-motive force, conduction, and insulation, XXI 94

ELECTRODE, VIII 628; XXI 95, 629 Electrometers, VIII 616 et seq; XXI 97

—Volta's condensing, VIII 614—Bennet and Singer's, 617—Volta's straw, L 962—Sir W Snow Harns's, VIII 620, 540-Faraday's instructions for using, 617-uses of, I 738

Electromotors, XXI. 99. ELECTRON, VIII 628 Electrophorus, VIII. 606; I 961-Ingenhousz on the, XII. 380

Electroscopes, VIII. 616 et seq -Hauy's 558—Bohnenberg's, XXI. 620—Sir W. Snow Harris's, VIII. 620

Electrotype, XXL 635-in nature printing, XVIII. 555-in bank-note printing, 557. ELECTROTYPIE, or electro-plating, VIII. 627, I 987—trade in, at Birmingham, IV. 732

Electrum, XVI. 352; XIX. 843-coins of, 359, 375 ELECTUARY, in pharmacy, VIII. 628 Eledone, genus of mollusks, XV 401. ELEEMOSYNA Carucarum, VIII. 628. ELECMOSYNARIUS, VIII. 628 Elegance of style, XIX. 141, 142 Eleginus, genus of fishes, XIL 285. ELEGIT, in law, VIII 628. ELEGY, VIII 628—Roman elegiac poets,

XVIII. 105. El-Elfee (Mohammad Bey), VIII. 489, 490,

492

ELEMENT, VIII 628.

— in physics and astronomy, VIII. 628; XII 459—in chemistry, VI 437 non-metallic elements, 455-in minerals, XV. 61-Hippocrates' theory of elements, XI, 533-elements of wine, XXI.

Elementary bodies, VI. 437-table of, 438. ELEMI, VIII 628.

ELENCHUS, VIII. 628 Electris, genus of fishes, XII. 307.

ELEPHART, VIII. 628; XIV. 195; XVII. 631—of Asia, III. 739—Africa, II 217—Assam, III. 764—Ceylon, VI 394—in India, XI. 454—Egypt, VIII. 432—Nepaul, XVI 143—Sumatra, XX 804 - elephant-shooting, 211 - longevity of, IL 234-trunk of, III. 100-ivory, 105; XII 664-teeth, 105-dentition, 106; XVI 473, 474-length of its intestines, III. 110-chemical composition of the tusk, XVI 418-size of tusks. XII. 664 — sea-elephant, XIV. 171 fossil, XVII. 168, 169, 606, 637, 638.

- ORDER OF THE, in Denmark, VIII.

ELEPHANTA ISLE, VIII 628; V 1 ELEPHANTIASIS, a disease, VIII 629; XIV. 443—in Ceylon, VI 392—leprosy, sometimes so called, XIII. 340.

ELEPHANTINE, Island, VIII. 629, 514.

BOOKS, VIII. 629

Elephas, genus of mammalia, XIV 194—fossil, XVII. 168—E primigenius, 169, XVII, 606, 610

ELEUSINIA, Greek festival, VIII. 629; XV. 758.

Elensimum, in ancient Athens, IV 170 ELEUSIS, city of Attıca, VIII. 630, 629; IV 216, 217—coms of, XVI. 371. ELEUTHERIA, festival, VIII. 631 ELEUTHEROPOLIS, in Palestine, VIII. 631. Eleutherus, Syrnan river, XX. 904. Elevation of the Host, VIII. 631.

#### ELE-ELL

Elevation, in architecture, IIL 509. - of a place, the cause of cold, VIL

ELEVATOR MUSCLES, VIII 631 ELEVATORY, suigical instrument, VIII. 631.

ELEVE, VIII. 631 ELF, VIII 631-elf-arrows, 1b -elf-candles, XIII 457. El-Faïz, king of Egypt, VIII 479

Elfield, early printing at, XVIII. 532. Elfrida, VIII. 660

El-Geezeh, in Egypt, VIII. 499-pyramids of, 450.

El-Ghooree, VIII 487 Elgra, Scotch town, VIII 631; XV 576, 577—cathedral, III 482—reptihan remains in the sandstone of, XIX 793

MARBLES, VIIL 682; III 708;

XVII. 81, 508

— (Lord), on the timber trade of Canada, VI. 142—on the education tax in Canada, 157—his treaty with the Chinese in 1858, XXL 265

ELGINSHINE, VIII. 632 See Morayshire Elgina, VIII 659 El-Hakim, king of Egypt, VIII. 478 See Hâkım.

ELI, Jewish high priest, VIII. 632 Eliac sect of philosophers, XVII 504 ELIAS LEVITA, Jewish grammarian, VIII. 632

ELIJAH, VIII 633. Eliomichthys, genus of fossil fishes, XVII.

ELIOT (John), VIII. 633 - (Sır John). V 393. ELIQUATION, In chemistry, VIII. 633
ELIS, of Elica, VIII 633, 634, XI. 18, 19—coms of, XVI. 372, 357.
Elisa, or Dido, VIII 16. ELISABETGRAD, in Southern Russia, VIII.

ELISABETPOL, IN Georgia, VIII. 634. ELISHA, Jewish prophet, VIII 634 ELISION, in grammar, VIII. 635 ELIXATION, in pharmacy, VIII. 635. ELIXIR, VIIL 635.

634

ELIZABETH, queen of England, VIII 635—reign of, 711—archery in her leign, III. 425, 427-restrictions on commerce, V. 382-her friendship for the Earl of Essex, VII. 761—her quarrel with him, 762—dramatists of the age of, VIII. 157—trial by battle, 231—her committal to the Tower in Mary's reign, 709death and character, 714-aid to Holland, XI. 569, 571—policy towards Ireland, XII. 477—her navy, XVI 92 joint-stock companies in her reign, XII 818-poetry in the age of, XVIII 121 -enactments regarding the poor, 801 anecdote of Raleigh and, 801-date of her death, 321, n-Protestantism maintained by, 829—her policy towards Scotland and Queen Mary, XIX. 778 et seg.—state of the navy in the reign of, XX. 127-negotiations for her marriage with Eric of Sweden, 847-woollen manufacture in her reign, XXI,

empress of Russia, XIX. 482 - (Port), on Algoa Bay, X. 714. ELIZABETHAN STYLE, in architecture, VIII. 637, III. 454.

ELK, VIIL 637; XIV. 206; IX. 387great fossil or Irish elk, XIV. 244; XVII. 170, 638—dentition of, XVI. 467. El-Kamel, king of Egypt, VIII. 482 El-Karn, Egyptian lake, VIII. 429. El-Karnak, temple of, VIIL 507.

El-Khuds, name of Jerusalem, XII 734. Elkington's electro-plating establishment, IV 732-his improvements in the art, XXI 637.

 system of draining, VIII. 133. ELL, a measure, VIII. 637. Eller (Dr), monster described by, XV. 503. ELLESMERE, in Shropshire, VIII. 687aqueduct of, III. 338-canal, XX. 229. Ellet (Charles), on the Mississippi, XVL 62, 63, 50, 81, 86. Ellice's islands, XVIII. 278.

#### ELL-ELS

Ellichpoor, in Hindustan, VIII. 638 Elliot (Captain), chief commissioner to China, VI 596—his proceedings there,

GEORGE AUGUSTUS), Lord Heath-field, VIII 638—his defence of Gibraltar, X 618.

(Sir Gilbert), L 214, 215-his letter to Hume on causation, 287-his charges against Sir Elijah Impey, V 529—his work on the improvement of Edinburgh, VIL 635-on the Alien Bill, V 546

- (Hugh), V. 530. (Prof.), his ocular stereoscope, XX.

685. Elhotson (Dr), on animal magnetism XX, 427, 431, 432

ELLIOTT (Ebenezer), the corn-law rhymer, VIIL 638.

ELLIPSIS, or Ellipse, VIII 639, X. 544, 550-mensuration of an XIV 517-instantaneous ellipse, I. 810-in masonry, XX. 725-various ways of describing,

— ın grammar, VIII 639. Ellipsoids, X. 558—artraction of, I. 823; IV 230—ellipsoidal lenses, XVI. 574.

spheroids, IV. 221. transcendents, IX. 679.

TURNING, VIIL 639 Ellipticity of the earth, I 815, 854. ELLIPTOGRAPH, VIIL 639.

Ellis on Dunbar's poetry, VIII. 247-on

Gower's poetry, X. 740

(Leslie), on Abel's mathematical discovenes, I 822—his report on mathematics, 804, n. 1-on Laplace's doctrine of probabilities, 820-on chemical forces, 936, n. 1-his biography of Duncan Gregory, 807, n. 2.

- (Mr), his observations on animalcules and mucor, III. 204—on the co-chineal msect, VIII. 283 Eliman (John), his improvement of South

Downs, II. 346

ELLORE, in Hindustan, VIII 640 ELLRICH, in Saxony, VIII 640 Ellwood (Thomas), his intercourse with

Milton, XV. 31 — implisonment of, XVIII. 719.

ELM, VIII. 640; XVII 758, 764-timber, XX. 167: XXI. 274-rock-elm, 276specific gravity of the wood, XIL 89; strength of, XX. 757, 758 order of plants, V. 206. ELMACINUS (George), VIII. 640.

El-Mansoorah, in Egypt, VIII 497. El-Menzeleh, lake, VIII. 429. El-Mo'ızz, VIII. 477. El-Mustansır, king of Egypt, VIII. 478.

ELMINA, African town, VIII. 640. Elms, genus of msects, IX 116
Elmo (St), file of, VIII. 588; XIV. 470.
——castle of, XV 780.

ELMSLEY (Peter), VIII. 640 Elocution. See Declamation. Elodes, genus of insects, IX. 107. Eloge, IX. 374-Cuvier's eloges, VII. 605. ELOGY, or Eulogy, VIII. 640. ELOHIM, VIII. 640: XXI. 188. ELGIGNED, or Eloined, in law, VIII. 640. ELONGATION, in astronomy, VIII. 640 Elopidæ, family of fishes, XII, 251.

Flops, genus of fishes, XII. 251. Eloquence of the Druids, VIII. 189. See Rhetoric.

ELORA, town in Hindustan, VIII. 640 temple of, VII. 716 Elpeny, in Ireland. VIII. 641; XIX. 420. Elphinstone (Hon. Mountstuart), his account of Affghanistan, IL 201-on the Punjab, XVIII. 687, 688-on the Himalayas, XI. 448-on the great desert of Hindustan, 449—on the Indian mon-soon, 451—on Indian land-tax, XXI, 45

- (WILLIAM), Scotch bishop, VIII. 641; XXI. 478-his Breviarium, XIII. 400. n. 5.

ELSTAGRE, OF Elsineur, VIII. 641.

#### ELT-EMM

ELTHAM, in Kent, VIII 641. Elvanite, rock, XV 134, 135, 137, 187 LLVAS in Portugal, VIII 64L El-Uksui, VIII 506. See Uksur. ELUTRIATION, VIII 641 Elwood (Mrs), on Cutch, VII 597

ELY, in Cambridgeshire, VIII 641.

—— cathedial of, VI 115

—— Isle of, VI 114—eels from, III. 162, n

Elymais, VIII 520 Elymas, king of Libya, VI 285 Elymus arenarius, plant, VIII. 645. Elymus Arenarius, plant, VIII. 645.

ELYTRA, wing-sheaths of beetles, VIII 642; IX. 40.

XIX. 837

EMANCIPATION, in Roman law, VIII 642. - of negro slaves, XX. 324 EMATHIA, VIII. 642

EMAUM GHUR, in Scinde, VIII. 642. EMBALMING, VIII 643. - by the Guanches, VI 163

EMBANKMENT, VIII. 643; VII. 323, 324, XIX. 213—effect of, on the navigation of tidal rivers, XVI. 86—embankments on railways, XVIII. 759

EMBARGO, in commerce, VIII 647 EMBASSY, VIII. 647; II. 652. See Diplomaev

EMBATILED, VIII 647. EMBDEN, or Emden, in Hanover, VIII. 647; XI 212—presbyterian church at, XVIII 486

EMBER-WEEKS, VIII. 647. Emberiza, genus of birds, XVI. 760 EMBLAZONING, VIII. 647 See Blazonry

and Heraldry EMBLEM, VIII. 647. EMBOLISM, VIII. 648

Embolite, mineral, XV. 107. EMBOSSING, VIII. 648.

EMBRASURE, in alchitecture, VIII. 648in fortification, IX 807. Embrithite, mineral, XV 119

EMBROCATION, VIII. 648
EMBROIDERY, VIII 648—in Glasgow, X 650—m Greece, XI. 17—imports of, VIII 734—of Sindh, XX. 304 EMBRUN, in France, VIII. 648 EMBRYO, in physiology, VIII. 648; XVII.

684 et seg

in plants, V 140, 155, 157, 158.

EMERALD, VIII. 648, IV. 682, 683, XV. 88; XVII. 623—comparative analysis of emerald and beryl, IV. 683-dichroism in, XVI 666—specific gravity of, XII. 88. See Beryl.

copper, XV 102.

type, XXI 401
EMERITUS, VIII. 649.
EMERSION, VIII. 649.
Emerson, on mechanics, XX. 716, 718on the strength of timber, &c, 758.

(WILLIAM), VIII. 649, I 713 and n.5—rule for ordinates given by, XX.

142.

(Dr), on the mortality at Philadel-phia, XV. 609. EMERY, VIII. 649; XV. 87—of Naros, XI.

Emerylite, mineral, XV. 79. EMETIC, VIII. 649; XVIII. 133. Emeu. See Emu.

EMIGRATION, VIII. 649-from Ireland, XII. 502-to Canada, in 1852-53, VI. 153-Scottish, to Cape of Good Hope, X. 712 -New Zealand as a field for, XVI 235 -the United States, XXL 422, 482 et seg.; XVIII 339-annual, from United Kingdom, VI 154—its insufficiency to keep down population, XVIII. 343—encou-ragement of, XXI. 677.

EMINENCE, VIII. 652. EMOR, VIII. 652, 199; III 350-rule of emirs in Spain, XX. 461. Emly, in Tipperary, XXI. 287. Emma, wife of Canute, VIII. 662.

EMMANORI, VIII. 652.

### EMM-ENC

Emmanuel (Victor), king of Sardinia, XII 658-his aid to the British and French in the late Russian war, XIX. 507-his reign, 642

king of Portugal, XVII. 4 College, Cambridge, XXI 466. Emmelchthys, genus of fishes, XII 213, 287, 288

EMMERICH, in Rhenish Prussia, VIII 652 Emmett (Robert), V. 624; VIII. 218; XII 500.

EMMUS (Abbo), VIII. 652 Emory (Major), his account of New Mexico, XIV 729.

Emotional encories on the foundation of motal techtude, XV 543

Emotions, or passions, XIV 578 See Moral Philosophy. EMPALEMENT, a punishment, VIII 652
EMPEDOCLES, VIII 652—on the soul of animals, III. 309—taught the true

theory of the moon's light, I 568 EMPEROR, VIII. 653

— of Japan, fish, XII 301. Empetraceæ, nat order of plants, V 205 EMPHYSEMA, VIII. 653

Empidiæ, family of insects, IX. 235 EMPIRE, VIII 653-German, 1b -- empires in Europe, IX 397. EMPIRIO, VIIL 653.

Empis, genus of insects, IX. 236. Employés on railways, XVIII. 785.

EMPORIUM, VIII 653 EMPSON (Wilham), VIII 653—on the English government and laws, 756 on law, XIII 270

Empusa, genus of insects, IX. 157. EMPYEMA, a disease, VIII. 653. EMPTREUM of Empyrean, VIII 653 EMPYREUMA, in chemistry, VIII 653 Ems, in Nassau, VIII 653.

- river, VIII. 653, XI 211; XVIII. 662.

EMU, or Emeu, VIII 653; VI. 261; XVI 796; XVII 634; XXI. 31. Emy (Colonel), roofs constructed by, XXI 394, 395.

Emys, tortoise, XIX. 17-fossil, XVII. 158. ENALIOSAURIA, fossil reptiles, VIII. 653; XVII. 143, 640—geological distribution of, 154

ENAMEL, VIII. 653—of the teeth, II 830, III. 105; XVI 407, 410—painting in, VIII 654—improved by Petitot, XVII 494—photography on enamelled glass

and metals, 551

ENAMPLING, VIII 654—of Delft-ware,
VII. 705—of leather, XIII 310—of pottery and porcelan, XVIII. 444. Enargite, mineral, XV 119.

ENCAUSTIC and ENCAUSTUM, VIII. 654 PAINTING, VIII. 654—among the Greeks, XVII. 51. ENCEINTE, in fortification, VIII 654

Enceladus, genus of insects, IX. 85. Encephalous mollusks, XV. 355, 322. ENCHANTMENT, VIII 654. See Divination, Magic, Witchciaft.

ENCHASING, or chasing, VIII. 654. Enchehophis, genus of fishes, XII. 268. Enchelis, genus of animalcules, III 200. Enchelycore, genus of fishes, XII 231 Enchelynassa, genus of fishes, XII 231, 220

Enchelyopus, genus of fossil fishes, XII 347.

Enchodus, genus of fossil fishes, XII. 345 ENCHORIAL CHARACTERS, VIII 654; XI. 371, 372, 403. See Demotic. Encına (Juan de la), X. 623.

Encke (Johann Franz), I. 855-his eminence in cometary astronomy, 1b -his astronomical labours at the Berlin Observatory, III 819—on the perturbation of the small planets, IV. 91; I. 858 his researches on the comet of 1819, 857-attributed its accelerated motion to a resisting medium, ib -this theory questioned, 1b.-his comet, 856; IV.

Encoubert, in zoology, XIV. 191. Encrintes, XVII 98, 99. Encrinus, XXI. 994

### ENC-ENG

Encumbered Estates Bill, V 671, XVII 365-court plans of, XXI 334

ENCYCLOPADIA, VIII 654, VII 607-Alfarabius probably the first compiler of an, II 477—Chinese, VI. 577 See Preface to the ENCYCLOPÆDIA BIN-TANNICA.

- Britannica, VII. 299; see Preface to the-value of presentation copies, and paper duty, of the last edition, 357, n 2-stereotyping of, XVIII. 550 -contributions to, by Dr Barclay, IV. 443; Dr Doig, VIII 91; Thomas Galloway, X. 387; Bishop Gleig, 677, Hazlitt, XI 259, Haydon, 252; Leshe, XIII 345, 346; Mill, XV 12, Milne, 600, n; Playfair, XVIII 5, 6, n 1; 96, n; Robison, XIX 239, I 870, 871, 872, 930, n 2, XX 18, Dr Thomas Young, I 874, 900; VI 378, 369, XXI 964; Professor Wallace, 687, James Wilson, XII 331, n; XXI 876, Spalding, XX. 496; Robert Stephenson. 683; Dr Thomas Thomson, XXI 236; P. F. Tytler, 415—former editors of, XIX. 289; Macvey Napier, XV 778; Dr James Browne, sub-editor, V 686-Smellie's connection with, XX 336.

to, XXI 146; Dr Andrew Thomson's,

Encyclopædical trec, D'Alembert's, I. 1. Encyclopædists, X 47 Encyclopedie (Fiench), D'Alembert's con-

tributions to, IL 462 ENDEMIC diseases, VIII 654. Endive, V. 197—culture of, XI. 743 Endocarp, in botany, V 135 Endoceras, fossil mollusks, XVII. 112.

Endœus, Greek sculpton, XIX. 852 Endogens, one of the primary classes of plants, VIII. 655; V. 80, 83, 179
Endomychus, genus of insects, IX. 151.

Endopleura, in botany, V 139 ENDOR town in Galilee, VIII 655-witch of. III, 321

Endorse, in heraldry, XI 327 Endosmose, XII. 101, 102; V 86. Endosperm, in botany, V. 139 Endospores, in botany, V 142 Endothecium, in botany, V 126. Endowments, in the church, I 542—Scotch

Established Church, XVIII 494 ENDYMION, VIII 655

Energetics, applied, XIV 416

Energy, in mechanics, XIV. 403, 404, 411 sources of, 416-stored and restored, 408-distributed between two bodies, 413—transformation of, 418—all forms of, convertible, XX. 618.

Lock, manufacture of fire-arms at, XXI. 695

ENFILADE, in the military art, VIII. 655: IX. 801.

ENGADINE, Swiss valley, VIII. 655. ENGASTRIMYTHI, VIII. 655

EngHen, town of Belgium, VIII 655.

— (Duc d'), VIII. 655—execution of,
X. 129; XV. 794.
Engineer, VIII. 655—institution of civil

engineers, III. 506—French corps of, 641—Austrian, 645—British, 666 See Army—naval, XVI 104—log of, in steam-vessels, XX. 656

Engineering (Civil), I. 865; VIII. 655its relation to physics, I. 865—applica-tion of statical principles to, 870—taught in Durham University, XXI, 472; and in Trinity College, Dublin, 489.

Englides, tribe of insects, IX. 114
England, VIII 656—history of, ib.—statistics, 715—agriculture, II. 253 et seq.
—expeditions against Algiers, 569 et seq. -American colonies, 700, 708, 707, 708 -archery, III. 424 et seq.-pointed architecture, 448, 480-later architecture, 454-recent pointed architecture, 456-Saxon and Anglo-Norman architecture, 480-weights and measures, 584-army,

### ENG-ENG

662-gunpowder, 683-artillery, 1bpainters, 712-baking, IV. 378-bellringing, 629—brewing, 321—canals, 367 -union of its crown with that of Scotland, 381-history after that union, ib -union with Scotland, 449; XXI 418 -attempt to dissolve that union, V 452—castles in former times, VL 326—influence of the wars of the Roses on chivalry, 625 - comage and the mint, VII. 68—commerce, 189—navigation laws, 145, 189—mercantile system, 192; losses from that system, 193— Lord High Constable of, 299—corn laws and trade, 374—influence of the cottage system, 433—effects of the cotton manufacture, 438, history of that manufacture, 440-cutlery of, 600 -war with Denmark, 742-condition of, during the Crusades, 528-law of divorce, VIII. 68—dock-yards, 78—drama, 143, 146, 156—duelling, 231—title of Duke, 234—fisheries, IX. 643 aw 1egarding fishing on the sea-coast, 602—hunting, XII. 33 et seq—glass-making, X. 659—language, XIII 211— law of libel, 357—lunatic asylums, XIV -visit of Louis Philippe to, in 1845, X. 222—exportations from, and importations into, France from England, 261 —friendly societies in, 310—leprosy, XIII. 340—royal arms of, XI. 322—historical writers, 548-horses, 633 et seq -horsemanship, 673-insurance offices in, XII. 406-condition of the Jews in, 779, 782, 783-triassic rocks in, XV. 206-colitic or jurassic, 206, 207, 208cretaceous, 209-coal, 203; VII 116 et seg . 127-religious missions to foreign countries, XV 270; sum of money expended on, 272-banking, 453-money, 485, 436, 488, 489; XVI 388—mysticism in, XV. 758—system of education in, 823-vital statistics of, 649-oaths in, XVI 399-proportion of insane, XIV. 536-navy, XVI 89-newspapers 180—history of art in, XVII 77 and n. 1—history of the parliament of, 288 -franchise in, 293--classical learning in sixteenth century, 523-its philology compared with that of Germany, 525heights of mountains in, 643-poetry, XVIII. 120-North-west voyages undertaken by, 166-police of, 191-poor laws of, 299 et seq —increase of population, 341—expectation of life, 342—postoffice, 403 et seq —pottery, 433—porcelain, 437—Presbytenanism, 488—prisons, 567-introduction of printing, 534 -railways, 752; extent of, 784-the Reformation, 828; VIL 483 - roads, XIX. 225-10mance, 267-royal family, 456—sculpture, 865—sanitary measures, 603—ship-building, XX. 119 et seq surgery, 818 - silk-manufacture, 276; learing of silk-worms, 292 - slavery, 320—suicides, 800—quantity of spirits charged with consumption duties in. XXI. 74—early history of the tea-trade in, 89-land-taxes in, 45-timber, 268 et seq.—sheep and wool, 906 et seq— universities, 452—woollen manufactures, 913—defences of, 701—map of, VIII Plate. See Chronological Table, VI 681 et seq., also Britain, Scotland.

England, Church of, VIII 792, 744—ordination in, XVI 703. See Episco-

pacy, Bishop, Benefice, &c. Engledue (Dr W. C.) on phreno-mesmer-

ism, XX. 440. Englefield (Sir H.), his portable barometer, IV. 466—his filter, IX. 581—on heat, XI. 263-on the spectrum, XVI.

Englehendt, on the level of the Caspian Sea, VI 311.

ENGLISH CHANNEL, VIII. 792—analysis of the water of, XIX. 585

Ene water of, JAL 585

arc of meridian, I. 887.

blue, in dyeing, VIII. 304.

LANGUAGE, VIII 793; XIII. 211—

its superiority to the French as an instrument of thought, I. 229, n. 2-spe-

#### ENG-ENT

cimen of a dictionary of, VIII 9-Bibles, IV 702 English type, XXI 401, 403

Englishmen, then tendency to dread a French invasion, V 552—distinguished as sportsmen, XX 211

ENGOULEE, in heraldry, VIII 813. ENGRAFTING, in gardening, VIII 798 See Grafting

ENGRAILED, in heraldry, VIII. 789; XI

Engramelle (M. D J), his work on insects, IX. 6

Engraulis, genus of fishes, XII. 237fossil, 347.

Engraving, VIII. 799—on gems, 813—aquatuta, III 331—of dies, VII 94—on glass, VIII. 818—steel, ib—mezzotanto, XIV. 733; XIX. 465-Blond's coloured engravings, IV. 788-of gunfurniture, XI 101-on stone, XIII 511 -use of the dry needle in, XX. 746multiplication of engraved copperplates by voltage electricity, XXI 636engraving, 902-of the maps of the

trigonometrical survey, 336 Engrained, in dyeing, VIII 813 Engrossing of corn, statutes against, VII

ENGUERA, Spanish town, VIII 813 Engura. See Angora. ENHARMONIC, VIII. 813. See Music

Enhydra, sea-otter, XIV. 159—dentition of, XVI 461.

Enicocerus, genus of insects, IX. 116 Enicurus, genus of birds, XVI. 752.

Enigma, VIII 813. See Enigma.
Enipeus, river, VIII 813.
Enibeuyzen, in Holland, VIII 813.
Enisemeny, VIII 813.—Mr Windham's
act respecting, V 599

EnManufe, in heraldry, VIII 814. En-Nasır, kıng of Egypt, VIII. 484, 485 Enneacrunos, fountain, IV 170

ENNEAGON, IN geometry, VIII. 814.
ENNEATIOAI, VIII. 814
ENNIS, IN Ireland, VIII. 814; VI 754.
ENNISCORTHY, IN Ireland, VIII 814, XXI.

Enniskillen, in Ireland, VIII 814; IX. 516.

Ennistymon, in Ireland, VIII 814. Envius (Q), Roman poet, VIII. 814; XIX. 313—poetry of, XVIII. 104—on echini, as food, XXI 990.

ENOCH, VIII. 815; I. 454 Enontekis, climate of, XIII. 237. Enoploclytia, fossil lobsters, XVII. 102. Enoplosus, genus of fishes, XII. 275—fossil,

Enoplotenthis, genus of mollusks, XV. 399. Exos, in Emopean Turkey, VIII 815
Exs, in Metaphysics, VIII 815.

Austrian city, VIII 815.

Austrian cry, VIII 815.

— niver, VIII 815; IV. 309, 312.

ENSEELED, in falconry, VIII. 815.

ENSRAM, in Oxford, VIII 815.

ENSIGN Cartilage, III. 9.

ENSIGN, VIII. 815; VII. 202—naval, VIII.

Ensisheim, meteoric stone of, XIV. 629. Ent (Sir George), VIII 815. Entablature, VIII 815; III 509—Doric,

464, 476, 477— Ionic, 465, 475, 477— Corinthian, 467, 474, 477—Caryutic, 477 ENTAIL, VIII 815—abolition of, in the Ionian islands, XII 448

Entalophora, fossils, XVII 98 Entasis, in architecture, III. 509. Entelmintha, XXI. 974.

Enterion, genus of annelides, XL 301 Entomoconchus, fossils, XVII 101.

ENTOMOLOGY, IX. 1-the study defended against the charge of cruelty, III. 177 —use of flies in angling, 147 et seqtenacity of life in insects, 176—their insensibility to pain, 177—eyes of msects, 98—Fabricius on, IX. 465—Latreille, XIII. 248—Moufet, XV. 666—Kirby and Spence's introduction to, XIII. 96; XX. 504-distribution of insects, XVII. 636-kinds injurious in

### ENT—EPI

walk on water, XX. 753-method of destroying noxious kinds, XXL 549. Entomostraca, crustacea, VII. 542—their nervous system, 538-their organs of reproduction, 509-fossil, XVII. 101. ENTOZOA, IX. 266; III. 192, 193; XXI 974 See Intestinal Worms. ENTRE DUERO E MINHO, IX 266; XVIII.

Entre Rios, in La Plata, XVII 779. Entrecasteaux Sec D'Entrecasteaux. Entrepot, in commerce, IX 266 ENTRESOL, in architecture, IX. 266 Entrophic organs, III 58, 105 ENTRY, in law, IX. 266-in book-keeping, V 28, 29.

ENUMERATION, IX. 266—enumerations of the people, XV. 625.

Envalson (Carl), Swedish dramatist, XIX. 699.

ENVELOPE, in fortification, IX. 266. Envelopes of flowers, V. 122, 123. - for letters, XXL 68 ENVOY, IX. 266 See Ambassador ENYED NAGY, in Transylvania, IX. 266 ENZULLI, Persian town, IX. 266.

Eoa, XI 387. ECCENE PERIOD, in geology, IX. 266; XV 211—flora of, V. 237—corals, XVII. 97 EOLIPILE. See Æolipile

Eolis, genus of mollusks, XV 356, 357,

Eolophone, musical instrument, XI. 230. Eooa, island, IX. 266 Eora, Athenian festival, IX. 266
Eos See Aurora

EOSTRE, Saxon goddess, IX. 266. Epacridaceæ, nat older of plants, V. 198

-region of, 229; XVII. 629. EPACT, in chronology, IX. 266; VI. 83-

tables of, 84, 85.

EPAMNONDAS, Theban general, IX 266,
XXI 177—his army, III 628—anerdote
of, IX 578—degraded, XXI 178—unsuccessful attempt on Sparta, 1b death of, 179

EPAULEMENT, in fortification, IX. 266 EPAULETTE, IX 267

Epée (Abbé de l'), on the education of the deaf and dumb, VII 674, 677, 680. Epeira, genus of alachnides, III 381. EPENTHESIS, in grammar, IX. 267. Epeolus, genus of insects, IX. 200. EPERIES, town in Hungary, IX. 267-butcheries of, XII. 22

EPERNAY, French town, IX. 267-wines of, XXI, 883

EPEUNACTÆ, IX. 267. Ернан, a Jewish measure, IX. 267. EPHEBEUM, IX. 267; XI. 168. ЕРНЕВІ, IX. 267. EPHEMERA, IX. 267

insects, IX. 177; III. 149. EPHEMERIS, IX. 267; III. 815; IV. 74, XIII. 687.

EPHESIANS, Epistle to the, IX. 267. EPHESUS, IX. 267—church of, XVIII. 481 -coms of, XVL 376 EPHETÆ, Athenian judges, IX. 269.

Ephialtes, genus of insects, IX. 190; XX. 500. Epibulus, genus of fishes, XII 265, 267.

Ephippus, genus of fishes, XII. 302-fossil,

Егнор, in Jewish antiquity, IX 269 EPHORI, Doric magistrates, IX. 269; XX.

EPHORUS, Greek historian, IX. 270. EPHRAEM SYRUS, IX. 270. EPHRAIM, IX. 271. EPHYDOR, Athenian officer, IX. 271 Ephydra, genus of insects, IX. 256. Err, a Greek prefix, IX. 271. EPIBATÆ, IX. 271 EPIC poem, IX. 271; XVIII. 99. Epicalyx, in botany, V. 123 Epicarides, crustacea, VII 542. Epicarp, in botany, V. 135.

EPICEDION, IX. 271. EPICENE, in grammar, IX. 271 Epicharis, genus of insects, IX. 200. EPICHARMUS, Greek poet, IX. 271 gardens, XI. 758, n-how some can Epichetrotonia, IX. 272.

#### EPI-EPI

Epichlorite, mineral, XV 78. EPICLERUS, IX. 272

EPICTETUS, Stoic philosopher, IX. 272; XIV. 454.

EPICUREAN PHILOSOPHY, IX. 272; XV. 552, L 318 — Bacon's admiration of Epicurean physics, 71-Gassendi's partiality for, ib. EPICURUS, IX. 273-

-character of T. 219respect paid to his system by his followers, 321-his definition of motion, 566—his notion of vision, 621—materialism, III. 308 and n—Canonica, VI. 191.

EPICYCLE, IX. 274—system of, IV. 53 EFICYCLOID, in geometry, IX. 274; VII. 269—epicycloidal teeth forwheels, XIV.

Epicyrtus, genus of fishes, XII. 246. EPIDAMNUS, city of Illyricum, IX. 274, TV. 202

EPIDAURUS, Greek city, IX. 274-serpents of, XIX. 56

EPIDEMIC, IX. 275, VIII. 655—insanity, XIV 527—fevers, IX 526—diseases among silkworms, XX. 292, 293— Sydenham on epidemics, 894

Epidermis of skin, II 834, XIII 302-of the mucous membrane, IL 836 - of plants, V 74.

EPIDICASIA, IX. 275. Epidii, Caledonian fribe, VI. 74 Epidote, mineral, XV 85—rock, 135. Epiglottis, in man, III. 50—in the lower animals, 101. EPIGONI, IX. 275.

EPIGRAM, in poetry, IX. 275; XIV. 320 Epigynous stamens and petals, V. 127,

EPILEPSY, IX. 275; XIV. 436; XVII. 700-with insanity, 535-in the horse, XXL 574.

Epilobium, plant, V 192. Epilogue, IX. 276 Epimachus, genus of birds, XVL 771. Epimenides, the Cretan, IX. 276 EPIMETHEUS, IX. 276, XVIII. 640. EPINAL, French town, IX. 276, XXI. 672. Epinay (Madame d'), her account of David Hume in Paris, XIL 4, n. 2. Epiphanes, XI. 391.

EPIPHANIUS (St), IX. 276-on the Ebionites, VIII. 369

EPIPHANY, Christian festival, IX. 276. Epiphlœum, in plants, V 82 Epiphragm, in mosses, V. 145.

EPIPHYTES, plants growing upon other plants, IX 276, V 221, 77, 101.

EPIRUS, in Greece, IX 277—monatchy of,

XV. 413—coins of, XVI. 370 Episcopacy, IX. 278—favoured by James

I, V. 383—his design to establish it in Scotland, ib -attempt of Charles I. to set it up in Scotland, 394-violent attempts of Charles II. to introduce it into Scotland, 428—its difference from Presbyterianism, XVIII. 480-rise of, 482—no scriptural warrant for, according to Presbyterians, 481-its alleged succession from the apostles, 482 — abolished in England in 1642, 489 supposed possibility of its union with the Greek Church, XI. 35-James VI's plan for introducing into Scotland, XIX.

Episcopalians, IX. 394 - their places of worship in Scotland, XIX. 801-severe treatment of, in Scotland, after the rebellion of 1745, XX. 315

Episcopius (Simon), Armenian divine, IX.

Episinus, genus of arachnides, III. 380. EPISODE, in poetry, IX. 282 Episperm, in botany, V 139. Epistilbite, mineral, XV. 76 EPISTLES AND GOSPELS, XV. 282. Epistropheus, vertebra, III. 5. Epistylium, or Epistale, in architecture, III. 509 EPITAPE, IX. 282.

EPITHALAMIUM, IX. 283. Epithelium of plants, V. 74. Epitragus, genus of insects, IX. 132.

#### EPI-ERA

Epizoa, XXL 981. EPOCH, in chronology, IX. 283; VI 664difference between æra and epoch, IL 165-in geology, XV. 195, 196 et seq.

EPODE, in lyric poetry, IX. 283 EPPING, town in Essex, IX. 283-336-dairies, 337

Eprodoscideæ, division of insects, IX. 258 Eproductie, IX. 283, XL 157.

EPSOM, town in Surrey, IX. 283. Epsomite, or Epsom-salt, XV 99-Epsom Salts Cave, in Indiana, XIL 375

EPULONES, Roman priests, IX. 283
Equation of time, IV 23—table of, for converting mean time into apparent time, 133-table of, for every day of the year, VII 797-tables of, for the times of new and full moon, IV 122-126

- clocks, VII. 15 - in astronomy, IV 103.

EQUATIONS, IX. 284 - homogeneous, I. 645, n-absolute, II 50-in algebra, 502 et seq. — quadratic, 510 — certain general properties of, 513—cubic, 516 - biquadratic, 520 - reciprocal 522resolution of those whose roots are rational, 524-resolution of, by approximation, 526-loci of, 544-differential, IX. 741 - determination of the equations to curves, X. 543; of the forms and properties of curves from their equations, 545, 551-equations to suifaces of the second degree deduced

from their properties, 558 — Sturm's theorem in, XX. 784

Equator, IX. 316; XVI. 7—astronomical, IY. 2—geographical, X. 480—magnetic, I. 991, XIV. 57; XVII 617

EQUATORIAL, IX. 316—currents, XIV 652; XVII. 577, 579,

- instrument, IX. 816; IV. 154. - mounting of telescopes, XXI. 144. EQUERRY, IX. 316, XL 776. Eques, genus of fishes, XIL 285.

EQUES AUBATUS, IX. 316; XIII. 112. EQUESTRIAN, IX. 316

EQUIANGULAR, IX. 316. EQUIDISTANT, IX. 316 EQUILATERAL, IX. 316.

EQUILIBRIUM, IX 316-in mechanics, XIV 380—of the human body, III. 41—of fluids, XII. 78—of forces, VIII. 340—of arches, III. 416, V. 351; XII. 586—of roofs, XIX. 378, 379-theory of the tines, I. 816—of a ship, XX. 13, 152—of two pressures, 538—of three pressures, 540-of four, 541-several, 542parallel, 544—general condition of, 548. See Arch. Balance, Statics.

EQUINULTIPLE, IX. 317.

EQUINOCTIAL, IX. 317-points, ib; IV. 12 -dial, 317; VII. 779-current, IV. 176 -line, X 480

EQUINOX, IX. 317; IV. 14-Chinese ceremonies at, VI. 568. See Precession of the Equinoxes.

EQUIPOLLENCE, in logic, IX. 317. EQUIRIA, Roman festival, IX. 317.

Equisetacem, nat. order of plants, V. 216 -reproductive organs of, 143-spores

or cells of, 66, 68. Equitable Life Assurance Society, III 228, 224, 281; XII 405, 412—its valuable tables, XV. 614, 642.

Equites, in ancient Rome, IX. 317; XIX.

EQUITY, IX. 317-courts of, ib.-a source of law, XIII. 257.

EQUIVALENT, IX. 318-chemical, 1b.; VI.

Equula, genus of fishes, XIL 299.

EQUULEUS, instrument of torture, IX. 318 Equiculus, and Equus Minor, a constellation, IX. 318; IV. 80

EQUUS, IX. 318; XIV. 199-fossil, XVII. 173. See Horse

ERA, or Æra, IX. 318; II. 175; VI. 665— of the foundation of Rome, 666—Christian, 667-of the Creation, 668-of Constantinople, 670—of Alexandria, ib—of Antioch, 671—of Nabonassar, ib.—of the Seleucids, ib .- of Macedonia, 1b .-

#### ERA—ERI

of Alexander, 672-of Tyre, 1b -- Cæsarean of Antioch, ib -Julian, ib -of Spain, ib.—of Actium, ib—of Diocletian, ib—of Martyrs, ib—of the Armenians, 673-of the Hegira, ib-of the Yezdegird, or Galalman, 674 -Jewish eras, 669-Chinese, 675-Hindu, 676-dates at which different eras commenced, 677

ERANARCHA, Greek officer, IX 318 ERASISTRATUS, IX. 318; XIV 452-his anatomical knowledge, IL 751-on the nerves, 814-his skill in surgery, XX.

ERASMUS (Desiderius), IX. 318, XL 590effect of his writings in promoting the Reformation, I 15, n 2—his advice to Ammon for pushing his fortune, II 719 -his influence on the revival of learning, XVII 523-his New Testament, 696-his controversy with Luther on free will, XIII 734-on Luther, 724, 727-at Oxford, XXI 454

ERASTUS (Thomas), the originator of Erastian opinions, IX 323

ERATO, a muse, IX. 323; XV. 699
ERATOSTHENES, IX. 323—on astronomy,
III 790; IV. 6—on the figure of the

earth, IX. 547-on geography, X 464-467—on geometry, 501—as a philologer, XVIL 517

ERATOSTRATUS, IX. 323

ERBACH, town of Hesse-Darmstadt, IX.

ERBIL, town of Persia, IX. 323; III. 396. Erbium, a metal, VI 488 Erdmann (M), on magnetism, XIV 42. EREBUS, IX 323

- genus of insects, IX. 214. ERECHTHEUS, IX 323, IV 192of, 168, III. 515.

Erectile tissue, II. 799. EREKLI, modern name of Heraclea, IX. 323; XL 317.

EREMITE, IX. 323: XI. 352 Eremophilus, genus of fishes, XII. 263. Eresus, genus of arachnides, III. 383. ERETHISM, IX 323.

Erethistes, genus of fishes, XII. 262. Eretison, genus of mammalia, XIV. 187. Eretria, IX. 323; IV 199.

Eretrian school of philosophy, XIV. 499. ERFURT, Prussian city, IX. 324-interview

between Napoleon and the Emperor of Russia at, X 151-Electoral Academy at. II. 67. ERGASTULUM, IX. 324.

ERGOT of rye, IX. 324; V 172, XIV. 439. Eraboll (Loch), XX. 840, 841.

Eric, kings of Sweden, XX. 845, 847. Erica, genus of plants, V. 198. Heaths. ERICACEÆ, nat order of plants, IX. 324;

V 198 See Heaths Erichsen (G. F), his works on insects,

IX. 21. Ericht (Loch), XVII. 455.

ERICIUS, Roman military engine, IX. 324. Ericson (Gustavus), XX. 846.

Ericsson (Mr), his pyrometer, XVIII 706—his screw-propeller, XX. 137, 639. Ericulus, dentition of, XVI 452 ERIDANUS, river, IX. 324 - constellation,

1b ; IV. 80. ERIE, Lake, IX. 324; VI. 136; XVII. 395, 605—harbours on, XVI. 214.

- Canal, XVI 217, VI. 154. ERIGENA (Joannes Scotus), IX. 324 pantheistic doctrines, XVII. 283

ERIGONE, IX. 325, 266. Ernaceus, genus of mammalia, XIV. 150—teeth of, XVI. 451. ERINITE, mineral, IX. 325; XV 83, 103

ERINNA, Greek poetess, IX. 825. ERINNYES, the furies, IX. 825; X. 252 Eriocaulonaceæ, nat. order of plants, V.

ERIOMETER, IX. 825; VL 651; XVL 623; I. 897. Erioptera, genus of insects, IX. 226. Eriphia, genus of insects, IX. 250. ERIPHYLE, IX. 325.

ERIS, goddess, IX. 325.

#### ERI—ESC

Erismacanthus, fossil fishes, XVII. 117 Eristalis, genus of insects, IX. 241. ERIVAN, in Russian Armenia, IX. 325, XIX, 551, 521.

ERLANGEN, town in Bayaria, IX, 325. ERLAU, town of Hungary, IX. 325 Erman (Prof Adolphe), on the results of

Hansteen's magnetical expedition, I 991—on electro-magnetism, VIII 532 his experiments on the electricity of flame, 567—on the geographical distri-bution of gold, XV. 231. - (Mr), on salmon fishings of the

Obi, IX. 607, n. ERMIN, order of knights, IX. 325. ERMINE, IX. 325; XIV. 157-its fur, X.

in heraldry, IX. 325, XI 325ermines, 1b -erminois, 1b -erminites,

Ernesti (John Augustus), IX. 325. - (Augustus Wilhelm), IX 327. Erodion, genus of araclinides, III 378. Erodius, genus of insects, IX. 129. Eros, Greek Cupid, IX. 327, VII 590 EROSION, IX 327—of rocks, XV. 159 EROTIA, Thespian festival, IX. 327; VII

EROTIC, IX. 327. Erotylus, genus of insects, IX 151. EROUAD, town of Hindustan, IX. 327. ERPENIUS, or d'Espe (Thomas), IX 327 ERPETOLOGY, IX. 327. See Reptilia. Errard. in fortification, IX. 814
ERRATIC, IX. 327—blocks, ib.; XV. 215; XVII. 603

ERRHINE, medicine, IX 327. Error, in philosophy, IX. 327—in astronomy, ib.—probable errors, XVIII 624,
—— writ of, in law, IX. 327.

Erse language, IX. 328 Erskine of Dun, XIX. 780.

- (Capt), on the Fijians, XVIII 274 -on the Friendly Islands, 276.
(EBENEZER), IX. 328; XVIII. 493, -monument to, XX. 701

(RALPH), IX. 328; XVIII 498 (THOMAS), Lord Erskine, IX. 328. ERUGINOUS, IX. 329.

Eruptions, frequency of volcanic, XXI 601-cones of, 604 Eruthra, temple of Hercules at. VII 714 Erxleben's classification of animals, III

183. Enycina, genus of insects, IX. 208. ERYMANTHUS, IX 329

Eryon, fossil animals, XVII. 102. ERYSIPELAS, IX. 329; III 269-surgical treatment of, XX. 827-in sheep, XXI

ERYTHRÆ, in Asia Minor, IX. 329. ERYTHRÆUM MARE, IX. 329; XIX. 817perplus of the, II. 209. Erythræus, genus of anachnides, III. 388

Erythrin, VIII 285. Erythrine, mineral, XV. 104.

Erythunidæ, family of fishes, XII. 250. Erythrinus, genus of fishes, XII. 251 Erythroxylaceæ, nat. order of plants, V.

ERYX, in Sicily, IX. 329; VI. 290. genus of serpents, XIX. 55 ERZEROUM, in Armenia, IX. 330; XXI 284—taken by the Russians, XIX. 495. ERZGEBIRGE, mountains, IX. 330, 382; X. 583.

Es-Salih, king of Egypt, VIII. 482. Esarhaddon, IX. 330. Esau, IX. 330-the land of, XII. 357. ESCALADE, IX. 330.

Escalloniaceæ, nat order of plants, V. 194 —region of, 228; XVII. 629. Escape, in architecture, III. 509. ESCAPEMENT of clocks, IX. 330; VII. 7,

XVII. 384—gravity escapements, VII. 11—of watches, 32. ESCARPMENT, IX. 330, 818. Escars, in geology, XV. 215. ESCARTELED, in heraldry, IX. 830 ESCHALOT, IX. 330.

Essington (Port), IV. 300

### ESC-ESS

Eschara, fossil animals, XVII. 98. ESCHAROTIC, IX. 330. ESCHEAT, in law, IX. 330 Escher (Mr), lost in a glacier, IL 625. Eschevin, IX. 330.
Eschscholtz Bay, fossils of, XVIII. 180

(F), his works on insects, IX. 15—

on the calogrades, XXI 1000 Eschwege in Hesse-Cassel, IX. 330 ESCHWEILER, town in Rhenish Prussia,

ESCUAGE, IX. 330

ESCULENT, IX. 330—roots, XI 739
ESCURIAL, IX 330—meaning of the name, XIII. 410, n 1—its architects, III. 453, n.—library of the, XIII 409—Arabic MSS in the, VL 310-founded by Philip II. XX. 470

ESCUTCHEON, or Scutcheon, in heraldry, IX. 331; XL 324-onnaments of, 335funeral, 340.

Esdaile (Dr), his work and experiments on mesmerism, XX, 436, 437 Esdraelon, plain of, XVII. 182. Esdras, Books of, IX. 331

Esenbeck (Nees ab), his works on msects, IX 13. Esgair-fraith, lead mine, XV 245.

Esher, in Surrey, IX 332. Esk, rivers, IX. 332-in Cumberland, VII 576—in Edinburghshire, VIII. 408—in Forfarshire, IX. 782, XIX 792 Eski-Sagra, Tuikish town, IX 332. Eslon (M d'), on animal magnetism, XX.

418 et seq Esmarkite, mineral, XV 88 ESNE, or Esneh, town in Egypt, IX 332.

See Isnè. Esocidæ, family of fishes, XII. 253, 254. Esocidei, family of fossil fishes, XII 347. Esophagus, IX. 332-in man, III 59-in brutes, 108-in insects, IX. 51-diseases of, in domestic animals, XXI 564.

ESOTERIC, IX 332, 455.

Esox, genus of fishes, XII 254-fossil, 347 -angling for E. lucius, III. 158, 159 ESPALIER, IX. 333—rails, XI. 700. ESPALION, French town, IX. 333 Espartero (General), XX. 480-483. ESPARTO, a kind of rush, IX. 833. Espen (Dr Van), on canon law, VI. 190 Esper (E. J. C), his works on insects, IX.

Espinasse (General), on artillery, III 689. Espinel (Vicente) IX 333—his novel,

XIX. 286. Esplanade, in fortification, IX 333 ESPOUSALS, In law, IX. 333.
ESQUILINE, hill, IX. 333, XIX. 356, 357.
ESQUIMAUX, IX. 333; II. 680; XI 43, 44;
XIII. 141; XVIII. 179—in ethnology,

IX. 347—their language, IL 694, XL 44; XIII 219. ESQUIRE, IX. 333, VI. 613
Esquirol (M.), on mental diseases, XIV.

528, 537. Esquivel (Don Juan d'), governor of Jamaics, XII. 672.

Essaying, IX. 333. See Assaying. ESSECK, or Esseg, capital of Slavonia, IX. 824.

ESSEDARII, IX. 334 Essen, Prussian town, IX. 334. Essence, IX. 334-essences of plants, XVL

D'ORIENT, IX. 334.
ESSENES, Jewish sect, IX. 334, 333. ESSENTIAL, IX. 335.

- oils, IX. 235; XVI 492, 496 Essequibo, county and river, IX. 385; XI. 81; XVII. 646.

Essex, IX. 335-police in, XVIII 200population and value of property, VIII.

(Earl of), in the reign of Charles the First, V. 402 et seq. (Robert, Earl of), VII 761; II. 15; VIII 713-his friendship for Bacon, IV

352—Bacon's ingratitude to, 353—his failure in Ireland, XII. 478.

towns in the United States, IX. 227

#### ESS-ETH

Essling, Austrian village, IX. 337, III. 760—battle of, X. 152 Esslingen, in Wirtemberg, IX. 337. ESTAFETTE, IX. 338 Estaing (Count d'), V 484; XVI 182. XXI 752. ESTATE, in law, IX. 338. ESTATES, in a political sense, IX 338—the three estates, XVII 291 ESTE, town in Lombardy, IX. 338 ESTELLA, Spanish town, IX. 338 ESTEPONA, Spanish town, IX. 338 ESTERHAZY, Hungarian village, IX. 338 ESTHER, book of, IX. 338. Estherna, fossils, XVII 101 ESTHETICS, IX 338 See Æsthetics ESTHONIA, Baltic province of Russia, IX. 338; XIX. 521—language of, XIII 215 Estimation of motion and forces in dynamics, VIII 340 ESTOILEE, in heraldry, IX. 339 ESTOPPEL, in law, IX. 339. Estrees (Admiral d'), V 426. ESTREMADURA, IX. 339; XX. 493—apatite found in, II 415-climate of, XVIII. 394-wines of, XXI 884, 885 ESTREMOZ, Portuguese town, IX. 339 ESTRICH, in commerce, IX. 339. ESTUARY, IX 340 See Æstuary Esunculus, genus of fishes, XII 229 ETAMPES, in France, IX. 340; XX. 35. ETAWEH, in Hindustan, IX. 340. ETCHING, IX. 340; VIII. 799, 800, 801needle, 803. - voltaic, XXI. 636-on stone, XIII. 511. ETELENT, Arabian town, IX. 340. Etelis, genus of fishes, XII 276 ETEOCLES, IX. 340, VII. 491 Eteocretes, VII 493 ETERNITY, IX. 340 ETESIAN WINDS, IX. 340, VIII 422 Ethan, psalms ascribed to, XVIII. 679 Ethebert, VIII 656 Ethelbald, king of England, VIII 657. Ethelbert, king of England, VIII. 657 Ethelfleda, VIII. 658.

Ethelgiva, or Elgiva, VIII 659 Ethelred, king of England, VIII. 657, 660 -number of mints in his time, VIL 73 —his navy, XX. 119. Ethelwold, VIII. 660.

Ethelwolf, king of England, VIII. 657. ETHER, IX. 340.

THER, IA. 340.

In chemistry, IX. 140—caoutchouc dissolved by, VI. 203—how to inflame it by electricity, VIII 590—specific gravity of, XII 89—poisonous qualities of, XIV. 439.

ETHERIDGE (Sir George), IX. 340.

Etherow, niver, VII 754

Ethical Philosophy, Bacon's disquisitions on, I 35—Hobbes' principles, 42—Cudworth's system, 44—little attention paid to, at the eig of the Restoration, 46— Barrow on, 1b -- Dr Law's system, 170, 172 and n. 2 - examination of Sir J Mackintosh's views on, 295, 296 et seq — Butlei's definition of self-love, 296 selfish desires, ib, 297-on the existence and supremacy of the conscience or moral faculty, 298—Bentham on the word ought, 299—deontology, 300—the formation of our passions, affections, and sentiments of virtue and duty, by means of association of ideas, 305—free-will, 307—division of the subject, 311, 312—Paley's views, 301, 314—retrospect of ancient ethics, 315-ethical philosophers of Greece, 316-Plato, 1b -Aristotle, 317-Epicureans and Stoics. 318-Epicurus and Zeno, 319-system of the Stoics, 320 - estimate of the practical philosophy of Greece, 321literature of Alexandria, 322—scholas-tic ethics, 323—Jewish and Mahommedan writers, 324-Augustin's system, 325 — doctrines of Anselm, Aquinas, Scotus, and Bradwardine, ib —William of Ockham and John Gerson, 326 — Aguinas, 1b.—the mystics, 327—temptations and errors of the scholastic age, 328-nomalists and realists, ib -exten-

#### ETH-ETR

sive influence of Aquinas' system, 328, 329-Spanish writers on scholastic ethics, 330, 331-modern ethics, 331-Grotius, ib; on Carneades' principles and arguments, 1b '332—Hobbes' principles, (see Hobbes)-difference between the acts resulting from reason and passion, 347 -self-love, 296, 330, 382; difference between it and benevolence, 360—definition of moral sentiments, 362-conscience, 298, 362, 420, 424, 425-avarice, 382-principle of hoarding, ib -origin of benevolence, 383; pity, one of its sources, ib -origin of a sense of justice, ib —crime and duty, ib.—power of asso-ciation in regard to remorse, 384—moral faculty uniformly spoken of as one, ib -moral approbation, ib - right and wrong, duty and virtue, ib -comparative morality of various religions, 390ethics should contain principles recognised by every religion, ib - honour, cowardice, and duelling, 391—social affections and malevolent passions, 397 -humility, ib -love of plaise, 398utility and virtue, 399, 417, 425—affinity of ethics to jurisprudence, 400 direct object of ethics, 1b—intimately connected with law, ib —Stewart's ethical theory, 409-the main object of conscience is to govern our voluntary exertions, ib -manner as an index of character and disposition, 411-Dr T Brown on sympathy and conscience, 415 -defect of the terms Association and Suggestion, 417-the laws of God founded on the principle of promoting happiness, 418-the existence of evil, ib -virtue must be loved for its own sake, 419primary pleasures, pains and appetites, 421, their number not determined, ib -two sects, the partisans of the selfish principle, and the advocates of benevolence, 1b -secondary desires or pleasures, 422-anger, 423-magnanimity, 1b -operation of conscience in reference to religious systems, 427—ethical philosophy of Scotland, 1b—of Germany, 428—of Plato, XVII 807—of the Pythagorean school, XVIII 711 See Ethics.

ETHICS, IX. 340; XV. 537-Aristotle on, III. 560; Kant, XIII 50-medical, XIV. 464. See Ethical Philosophy, Moral

Philosophy, Duty, Conscience ETHIOPIA, IX. 340; II 56—gold from, XV. 230—calendar, VI. 673—antiquity of painting in, XVII. 46-mountains, 644 Ethiopian race of man, XI 541. II 775, 221.

Ethiopic alphabet, II 615—Bibles, IV. 700; XIX. 839—language, XIII. 210, XVII 535.

ETHIOPS, IX. 340—Æthiops, mineral, VI 498.

Ethnographical phrenology, XVII. 565 ETHNOLOGY, IX. 341, XL 541, XVII. 641 -of Britain prior to historical times, III. 420-its connection with archæology, 421—Prichard's writings on, XVIII 512.

Ethology, political, XIII. 264. ETIENNE (St), town in France, IX. 355 manufacture of ribbons at, X 255

-(Charles), his anatomical researches, II 757.

Etiolation of vegetables, XIII. 460 See Blanching ETIQUETTE, IX. 355

Etmeidan, XXI. 372, 374. Etna. See Ætna.

ETON, IX. 355—fagging at, 467. Etroplus, genus of fishes, XII. 265. Etrumeus, genus of fishes, XII. 251. ETRURIA, IX. 355-the arched dome in-

vented in, III. 401—cities of, enumeration of their sites, IX. 361-monarchy of, XV. 413-coms of, XVI. 362-list of the cities of, IX 361. See Etruscans ETRUSCANS, IX. 355, XIX. 294—their al-

### ETS—EUL

phabet, II Plate — architecture, III. 443—art, XVII. 48—sculpture, XIX. 849 - Etruscan remains at Perugia, XVII 475-their libraries, XIII 384-—language, 200, 213—wars with the Romans, XIX. 297, 304, 305. See

ETSCH, river, IX. 361, II. 141. ETTLINGEN, town of Baden, IX. 361. ETTMLLER (Michael), IX. 361 ETTRICK, in Selkirkshire, IX. 362, XX 41 ETTY (William), painter, IX. 362, XVII 84.

ETYMOLOGY, IX. 363; X. 744 EU, French town, IX 363—chateau d', ib -visit of Queen Victoria to, X. 220 Euanemus, genus of fishes, XII 262 Enathlus, sophism of, XIII 634, n. EUBŒA, island, IX. 363; II 10—coins of, XVI 374-subdued by Mithridates, XV 284. See Negropont

EUBULIDES, Megaric philosopher, IX. 364 EUBLIUS, Athenian comic poet, IX. 364 Eucalypti, plants, V. 229; XVII 629, IV

261, XXI 31. EUCHARIST, IX. 364; VII. 206 See Supper (the Lord's) Euchites, devotees, XV 407

Euchlora, genus of insects, IX 125. Euchlorine, VII 670 EUCHOLOGIUM, IX. 364 Euchroite, mineral, XV 103.

EUCLASE, IX 364; XV. 88 EUCLASE, IA 504; AV. 506 EUCLID of Alexandria, IX. 364; III. 790; X. 499, 500—his Elements of Geometry, I. 551, 700, and n. 3, VII. 249, 250, X.

505; XX. 300—on optics, XVI. 521; I 619—his Porisms, XVIII 360, 361; XX 300—on angles, III. 143—his personal character, 302—his Data, VII 662, XX. - of Megara, XVII 786—his admira-

tion of Socrates, XX. 379 EUCLIDES, disciple of Socrates, IX. 365. Eucnemis, genus of insects, IX 106 Euctemon, Greek astronomer, IL 788 Eudea, fossil sponges, XVIL 93 Eudemus, disciple of Aristotle, IX 366-

his astronomy, III. 789-on mathematies, X. 500 Eudes, duke of Aquitaine, X. 6.

Eudahte, mineral, XV. 75
Eudohte, mineral, XV. 75
Eudohterer, IX. 866, L 962; VI 464,
XI. 623—Cavendish's, VI. 352—Dr Ure's, VIII. 625

EUDOCIA, empresses, IX. 366; VII 315 EUDOXIANS, heretics, IX. 366. EUDOXUS of Cnidus, IX. 366; X. 467, 499; III. 545, n. 5—his astronomy, 788.

- of Cyzicus, voyages of, X. 462. EUERGETES, title of honour, IX. 366. Egyptian king, XI. 391. Euganean Hills, IX 367; XII. 636 EUGENE (François), PRINCE, IX. 367; X.

34; V. 242-his military exploits, IV. 303-at the battle of Blenheim, V 448 Eugemacrinus, fossil echinoderms, XVII

Eugemus, Roman usurper, VII 309, 311 Euglossa, genus of insects, IX 201. Eugnathus, genus of fossil fishes, XII. 336, XVII. 126.

EUGUBIAN TABLES, IX. 871 Eugubio, Italian town, XL 78. EUHARMONIC, IX. 372.

Eukainte, XV. 118. Eulabes, genus of birds, XVI. 753.

EULER (Leonard), IX. 372-his supremacy as a mathematical analysist, I.
694—the real founder of the theory of continued fractions, 705-his applications of it, ib -his extension of the properties of angular sections, 712-his algebra, 713—his invention of a method of determining particular integrals, 715 -his explication of the principle of partal differences, 716—on dynamics, 719, 724—on magnetism, 742—his attempt to deshoy the coloured margin of a focal image, 749-his calculations and discovenes regarding the planetary mo-

tions, 781—his researches on comets, 783, 784—on light, 896—his character,

### EUL-EUR

II 90-on achromatic glasses, ib -employments of his last days, 174-on the arithmetic of sines, 547, 555, 560-on annuities, III. 221—on the problem of the three bodies, 810; IV 105—his as-tronomical labours, III 810—on hydrostatics, XII. 78-on the polarity of the needle, XIV. 4—on life assurance, XII. 398—on mortality, XV. 633—on music, 701—fluxions, IX 676, 677—on the mode of judging of the strength of a bridge from a model, V. 359—on the equilibrium of vessels, XX 152—on the strength of columns, 758, 760, 771—his dissertations worthy of perusal, 772.

Euler (Albert), on overshot wheels, XIL 168-his reacting machine, 172. Eulima, genus of mollusks, XV 383—fos-sil, XVII 110

Eulisite, rock, XV. 135.

Eulogy, IX. 274. Eulopa, genus of insects, IX. 170. Eulytine, mineral, XV 90

Eumachus, VI 285 ECMENES, IX. 374, XIII. 773, 774; XIV.

- L and II, kings of Pergamus, IX. 374; XVII 410

- genus of insects, IX. 197. Eumenia, genus of insects, IX. 208. EUMENIDES, the furies, IX. 374, 375, X. 352-dance of, VII. 645

Eumerus, genus of insects, IX. 239 Eumolpus, genus of insects, IX. 149. Eumorphus, genus of insects, IX. 151. EUMOLPIDÆ, priests of Demeter, IX. 374;

VIII. 629; XV. 753 EUNAPIUS of Sardis, Greek sophist, IX.

Eunice, genus of annelides, XI. 297. Eunomia, planet, IV 91. Eunomians, Arian sect, IX. 374 EUNUCH, IX. 375, VI 329. Euomphalus, fossil mollusks, XVII. 109,

110 Eupatagus, fossil echinoidea, XVII 100

EUPATOR, IX. 875 EUPATORIA, or Kozlov, IX. 375; IV. 743; VII. 505-disembarkation of troops near,

in 1854, XIX. 502 EUPATRIDÆ, IX 375, IV 193 Eupelix, genus of insects, IX. 170. EUPHEMISM, in rhetoric, IX. 375.

Euphonia, genus of birds, XVL 751. EUPHONY, in grammar, IX. 375 Euphorbia, genus of plants, V 206, 123, 127—species in Cape Verde islands, XXI 544—species of, employed in Ire-

land for poisoning fish, IX. 622. Euphorbiaceæ, nat. order of plants, V. 206

EUPHORBIUM, IX. 375; V. 206. EUPHORBUS, a Trojan, IX. 375. EUPHORION, IX 375.

EUPHRANOR, Greek artist, IX. 375; XVII. EUPHRATES, river, IX 376; IV. 344, 363,

364; XVII. 607, 646. EUPHROSENE, one of the Graces, IX 375. X. 741.

genus of annelides, XL 297. Euphyllite, mineral, XV. 79. Euplocampus, genus of insects, IX. 218.

Euplocomus, genus of birds, XVL 790. Eupoda, family of insects, IX 146. EUPOLIS, Athenian poet, IX 377. EUPOMPUS, Greek painter, IX. 377; XVII.

54. Eupyrion matches, XIV. 351.

EURE, in France, IX. 377.

- (Sir Wm.), his account of a dramathe representation of the sixteenth century, VIII. 144. EURE-ET-LOIRE, in France, IX. 377.

Eurlinus, genus of insects, IX. 138 Euribia, genus of mollusks, XV. 361—E. Gaudichaudii, ib.

Euric, Gothic king in Spain, XX. 460. Eurina, genus of insects, IX 254. Eurinorhynchus, genus of birds, XVI. 804. EURIPIDES, IX. 378; XX. 448, 449—tragedies of, VIII. 138—danced on the

### EUR-EVA

stage, 142-Porson's editions of, XVIII 369-intimacy of Socrates with, XX.

EURIPUS, strait, IX. 380, 364 - in the ancient amphitheatre, IX.

280 Eurite, rock, XV, 137-yeans of, in granite,

187.

ECROCLYDON, tempestuous wind, IX. 380 EUROPA, in Grecian mythology, IX. 380 EUROPE, IX. 380-balance of power in, IV 387-British colonies in, VII 147 troduction of cotton manufacture, 440earliest races inhabiting, VI. 364-state of, at the commencement of the Crusades, VII 524—origin and development of medicine in, XIV. 451, 457, 463, 466-mineral wealth and produce, XV. 247—ethnology of, IX. 350—portions of, unknown to the ancients, X. 464 rise of European power in India, XI. 481-art of paper-making in, AVII. 251-scholastic learning in, 521-philology first established in, 523-extent of its coast-line, 584-mean elevation of its surface, 590-mountains of, 595, 642 low-level, 602-rivers, 605-waterfalls, ib.—birds, 633, XVI 824—fishes, XVII 636—poetry of modern, XVIII. 106-production of the precious metals in, 462-Presbyterianism in eastern, 486 -reptiles, XIX. 31, 51-trade with Russia, 541-course of the rivers of, 181introduction of tea into, XXI 89—vol-canoes, 603, 605—map of, IX. Plate. EUROTAS, river, IX. 404; XIII. 148.

EURYALUS, a Trojan, IX. 404 Euryarthra, genus of fossil fishes, XII. 342. Eurybia, genus of insects, IX, 208. Eurychora, genus of insects, IX. 129.
Eurychora, wife of Orpheus, IX. 404;
XVII. 2.

Eurylaimus, genus of birds, XVL 757. EURYMEDON, river of Asia Munor, IX. 404. Eurymictera, genus of fishes, XII. 231 Eurynotus, genus of fossil fishes, XIL 334; XVII. 125

Eurypterus, fossils, XVII 101. Eurypyga, genus of birds, XVI. 798. EURYSTHEUS, king of Argos, IX. 404; XI

EUSEBIUS, bishop of Cæsarea, IX. 404-his account of a letter from Abgarus to Jesus, II. 40-on the evangelists, IX.

the Asiatic, his blindness and erudition, IV. 779.

Sustace (Rev. Mr), on the character of Bossuet, V. 60

Eustachian tube, III. 46 - Eustachian valve, II. 794; III. 63.

EUSTACHTUS (Bartolomeo Eustachi), anatomist, IX. 405 - his anatomical discoveries, II. 759, 761.

EUSTATHIUS, bishop of Berzea, IX. 405 archbishop of Thessalonica, IX. 405. XIII. 381

a Græco-Roman jurist, IX. 405. EUSTATIUS (St), island, IX. 405—surrender to the British, V. 496 Eustrophus, genus of insects, IX. 132. EUSTYLE, IX. 405; III. 509

Eusynchite, XV 106. EUTERPE, a muse, IX. 405; XV. 699. Euthalius, his division of biblical MSS. into clauses, XIX. 838.

Euthydemus, XX. 379, 400. EUTIN, city in Oldenburg, IX. 405. Eutocius, III 301; X. 499. EUTROPIUS, Roman historian, IX. 405. genus of fishes, XIL 262.

EUTYCHES, founder of the Eutychian sect, IX. 405; XV. 500, 501. Euxenides, Greek painter, XVII. 54. Euxenite, mineral, XV. 110.

EUNINE, or Black Sea, IX. 406, IV 740—comparative freshness of, XVII. 573 specific gravity of its water, ib Evæsthetus, genus of insects, IX 103.

EVAGRIUS SCHOLASTICUS, IX. 406. Evald (Johannes), Danish poet, XIX. 693. EVANDER, IX. 406.

EVANGELISTS, IX. 406.

### EVA-EXC

Evania, genus of insects, IX. 184. Evamales, tribe of insects, IX. 184 Evans (Sir De Lacy), XIX. 505-his command of the British legion in Spain, XX. 479, 480

(Mr), on British coins, XVL 362 and n. 6

(Mr), his journeys into the interior of Australia, IV 254

- (Oliver), of Philadelphia, his highplessule steam-engines, XX. 581. VAPORATION, IX. 406, XIV 646; XI 270: L 934-Leslie's atmometer for measuring, IV 177—cold produced by, VII. 100, 104, 545; VI. 459—principle of its frigorific power, VIL 102lisation by, 506, 507-analysis of beer by, V. 336—in the air-pump, XVIII. 40—electricity developed by, VIII. 566; I. 962-electricity a promoter of, VII 39 evaporation in steam-boilers, XX, 633 Eychester, VIII, 267

Eve, mother of mankind, IX. 415; II. 123, XXL 197.

EVECTION, IX. 415; IV. 36-discovered by Ptolemy, III. 792

EVELYN (John), IX. 415—on agriculture, II. 258-on erratic spiders, III. 382on the English stage, VIII 161, 162—on the dispersion of libraries, XIII 398 -his Sylva, XXL 267-on shipping,

- (Sir George S), his barometrical measurements, IV. 465, 466—on weights and measures, XXI. 800, 802.

EVEMERUS, IX. 415 Evening-primrose order of plants, V 192. Eventuality, phrenological faculty, XVII.

Everest (Col.), his measurement of arc of meridian, in India, L 853, IX. 552. - mount in Nepaul XV, 667: XVI

Evergreens, VII. 698; XI 696, 748; XVII.

755, 760, Eversmann (E.), his work on insects, IX.

EVESHAM, in Worcestershire, IX. 416

EVIDENCE, IX. 416—judicial, 418—un-written or oral, 419—the economists on, VIII. 377—circumstantial, XIII. 262— Dr Beddoes on demonstrative, IV. 566 -law of, VIII 790 - of poisoning, XVIII. 131.

EVIL. IX. 420-origin of, L 418: III. 311: XIII. 90-its existence inexplicable, I. 468.

EVIL-EYE, IX. 421. VIII. 446-king's evil. 1b . XIX. 842.

Evocati, Roman soldiers, IX. 421. EVOLUTION, IX. 421-in algebra, II. 497 -evolutions in scamanship, XX. 15 et seq.
EVORA, Portuguese city, IX 421.

EVREMOND (Charles M. de St Denys), IX. 422

Evremoniana, IL 739. EVREUX, French town, IX. 422. EWALD (Johannes), Danish poet, IX. 422 VII. 750.

on the Egyptian language, XI 412
—on the Pentateuch, XVII. 401, 402.

Ewes, milk of, XV. 11. See Sheep Ex, or Exe, river, IX. 423; VII. 763. EXALTATION of the Cross, Roman Catholic feast, IX. 423; VII. 520.

- Christ's state of, XXI. 211. Examinations, IX. 423—different kinds of, ib., 424, 425—academical examinations at Bologna, XXI. 451; Oxford, 458; Cambridge, 464; London, 467 et seq. Example, argument from, XIX. 124, 125. Example, IX. 427—of a diocese, ib.

EXAUCTORITAS, IX. 427. EXCAMBION, IX. 427. EX CATHEDRA, IX. 427.

Excavator, V. 73L EXCELLENCY, title of honour, IX, 427 EXCENTRIC, IX. 427

EXCENTRICITY, in astronomy, IX. 427. EXCHANGE, IX 428-inland, ib .- foreign, 430-nominal, ib.-real, 435-computed, 440. See Bills of Exchange

### EXC-EXP

EXCHANGE or Bourse, IX 447, V 21-Royal Exchange of London, XIII. 663, XI 59, clock of, VII. 19, 20, 21-in Dublin, VIII. 225-Stock Exchange, London, XIII. 663

EXCHEQUER Bills, IX. 447. COURT OF, IX. 447; II 7.

CHAMBER, Court of, IX. 448. Chancellor of the, VI. 412. in Scotland, IX. 448.

Excise, IX. 448—duties, XXI 59—Sir R Walpole's scheme of, V. 457, XXI 692 —laws regarding distillation, VIII 49, 50-duties, in Scotland, XIX. 808 Excitability, vegetable, XL 693.

Exclamation, in rhetoric, XIX, 133. Exclusion, Bill of, IX, 449, V 427 EXCOMMUNICATION, IX, 449—in the Greek Church, XI. 19

Excretions, XVII 665, 666, 667-of roots, V. 100

EXCUBLE, IX. 449. EXCUSATI, IX. 450. Exe, nver. See Ex.

EXECRATION, IX. 450—morsel of, VII. 418
EXECUTION, IX. 450, VIII. 791—for crimes in England and Wales, 750—

pleas in bar of, XIV. 445. EXECUTIVE, IX. 450—power, VIII. 775-in the United States, XXI. 429. EXECUTOR, in law, IX. 450.

EXECUTEY, in Scots law, IX. 451. EXEDRA, IX 451. EXEGESIS, IX. 451; XVII. 526

EXEGETES, IX. 451. Exegerica, in algebra, IX. 451. EXEGETICS, in theology, IX. 451

Exercise, conducive to health, XIV 441; XIX 611—of artillery, III 696—æora or gestation, IL 164—fencing, as an exercise, IX 508 and n—riding, XI 673-swimming, XX. 880.

EXERGUE, in numismatics, IX. 451; XVI. 353

EXETER in Devonshire, IX. 451-yale of, VII. 762—cathedral, III. 482, VII. 764 -savings-bank at, XIX. 657. - College, Oxford, XXI. 459

EXPOLIATION, in surgery, IX. 452. Exhalants of the human body, II. 802. EXHALATION, IX 452-of leaves, V. 103of gaseous matter from plants, 104 See Evaporation

EXHAUSTIONS, in mathematics, IX, 452 EXHIBITION, IX, 453-of works of the fine arts, ib , XVII 85-great exhibition of 1851, 1b; opening of, by the Queen, 672-French exhibition of 1855, IX. 454: X. 257-of the fine arts in Dublin, VIII 228-art treasure exhibition at Manchester, XIV. 256

Exhibitioners at Oxford, XXI 456. EXIGENT, a writ in law, IX. 454. EXILE, IX. 454. See Ostracism. Eximeno, on music, XV. 716. Existence of God, XXI. 185. Exmoor forest, XX, 410 EXMOUTH, town in Devonshire, IX, 454.

- (Lord), his expedition against Algiers, IL 572; V. 621. Exocetus, genus of fishes, XII. 264. Exodum, IX. 455.

EXODUS, Book of, IX. 455; XVII. 400-of the Israelites, VIII. 458.

papyri, XVII. 264

EXOGENOUS plants or Exogens, IX. 455; V. 80, 83, 179; XXI 267. Exoglossum, genus of fishes, XII 258. Exogyra, fossil mollusks, XVII. 105. Exorcism, IX. 455—in baptism, IV. 424.

EXORCISTS, IX. 455 EXORDIUM, in rhetoric, IX. 455. EXOSMOSE and Endosmose, IX. 455; XII

101, 102; VIII 603; V 68. Exosperm, in botany, V. 139. Exospores, in botany, V. 142. Exostosis, XXI. 557. EXOTERIC and Esoteric, IX. 455, 332.

Exothecium, in botany, V. 126. Exotic, IX. 455 Expansibility of air, XVIII. 31, 50.

EXPANSION, IX. 455—produced by elec-tricity, VIII. 589—by heat, XI 267—

### EXP—EYE

of the gases, I. 935, 957 and n 4valves, XX. 585, 654-work of steam with and without expansion, 620, 621, 624, 627,

Expansive engine, Watt s, XX. 579
Expectation, IX 456. See Probability
of life, IX. 456, XV. 647—in different countries, XII. 395; XVIII. 351, 353, in England, 355. See Annuities Expenditure of the United Kingdom. VIII. 751-of the United States, XXI. 428.

Experience, sources of, XIV 562-probability of future events derived from, XVIII 604-its testimony slighted by Plato, XVII. 802

EXPERIMENTAL PHILOSOPHY, IX. 456, L

EXPERIMENTUM CRUCIS, IX. 456 EXPIATION, feast of, IX 456

EXPLOSION, IX. 456-in powder manufactories, XL 159-in coal mines, VIL 124-lateral explosion, in electricity, VIII 613-of steam-boilers, XX. 634, 651, ranty of, in British steam-vessels,

EXPONENT, in algebra, IX. 457, II 491. - of the ratio, in arithmetic, IX 457. EXPONENTIAL calculus, IX. 457; VI 68curve, IX. 457-equation-quantity, ib. Exports from England, VII 190.

from the United Kingdom, VIII. 736, 737-of grain, VII 397-decline in the real, and increase in official, value of, 737-of cotton manufactures, 456 -of British produce, value of, XIV. 275; VIII 733, to the Mediterianean, XIV. 470—of leather, XIII. 311—of duties on, XXI 59—of the United States,

EXPOSING OF CHILDREN, IX. 457 in China, VI. 595. Ex-POST-FACTO, IX. 457.

EXPRESSED OILS, IX. 457; XVII. 408 See

Expression, Sir C Bell on the anatomy of, IV. 630—in music, XV. 715—in sculpture, XIX. 854 et seg Expurgatory Indexes, IV 712.

Extension, a primary quality of matter, XIV 570—consciousness of, 566, and n. 1. EXTENT, in law, IX 457.

Extinction of volcanic foci, XXI 606. EXTRACT, in pharmacy, IX 457 - of lead. IX. 457.

EXTRACTION of roots, in algebra and arithmetic, IX. 457; II. 497; III 606. EXTRAORDINARII, in the Roman army, IX.

EXTRAVAGANTES, IX. 457; VI. 190. EXTRAVASATION, IX. 457-of blood, XVII.

EXTREME, in logic, IX 458; XIII 607. - and mean proportion, m geometry, IX. 458

- Unction, IX. 458; XVIII 336. Exudation of liquor sanguinis, XVII. 690 inflammatory, 1b —tubercular, 1b —cancerous, ib .- theory of the exudations,

EXUVIÆ of animals, IX, 458. Ey. IX. 458.

Eydoux, on the mollusca, XV. 327, 376. EYE, town in Suffolk, IX. 458

- IX 458, XIII 461, XVL 694---its structure first analysed by Kepler, I 625—muscles of, III. 39, 45—anatomy of, 43-polarisation produced by, XVI. 676—its state for making microscopi-cal observations, XV 800—structure and functions, XVII 677, 678—alleged reading of clairvoyants without the aid of, XX. 438-of the lower animals, III. 94-of ants, 262-of the arachnides, 368-those of spiders phosphorescent, 378 n-of albinos, II. 4-its diseases in the domestic animals, XXI 576-effects of galvanism on the, 634 —of the crustaces, VII. 538—of m-sects, IX. 46; III 98—of fishes, XII. 219 — mammalia, XIV. 183 — leeches, XI. 305, n 8. See Eyeball, Eyelids,

### EYE-FAC

Eye of plants, propagation by, XI 694 of tuberous plants, V. 79. Eye-glass micrometer, XIV 745. Eye-lids, III. 45—third eye-lid, or nictitating membrane, 98 Eye-teeth, III. 25 Eyeball, XVII. 678 -- its form in different animals, III 95 Eyebright, V. 202. EYEMOUTH, in Berwickshire, IX. 458fishings of, IV 680. Eyk (Van), XVII. 63 Eylais, arachnides, III. 389 Eylau, battle of, X. 145; XIX. 493 EYRE, in law, IX. 458. - (Edward John), his explorations in Australia, IV 256 Eytelwein on the motion and velocity of

water, XII 74-on hydrodynamics, 76, 112, 120, 128 et seq.

EZEKIEL, the prophet, IX. 458—style of, XVIII. 98—his description of Tyre, XXL 405.

EZIONGEBER, IX. 459, II 434; XXL 27, 28.

EZRA, IX. 459; XII. 767-Old Testament canon completed by, IV 696—the supposed author of Chronicles, VI. 663; TV. 696.

# F

F, letter of the alphabet, IX. 460-in abbreviations, IL 610. Fabaceæ, nat. order of plants, V 190. Fabbroni on the chemical origin of galvanism, L 964-his discovery of a substance forming swimming bricks, V. 346 Faber (Peter), Jesut, XII. 751. FABIL, Roman family, IX. 460 FABIUS PICTOR, IX. 460. MAXIMUS Verrucosus, IX. 460— his war with Hannibal, VI 295, XIX. 310, 311 Ambustus, IX. 460; XIX. 303. Amoustus, IX. 400.; XIA. 509.

TABLE, IX. 461—onigin of, II. 187, XV

759—fables of Lokman, XIII 636;
Phædrus, XVII 504; La Fontaine, IX.
751; Dryden, VIII. 203; ÆSop, II. 187;
Wilkie, XXI. 867; Yriarte's, 966 Fabliaux, French, XVIII. 115.
FABRETTI (Raffaele), antiquary, IX. 463.
FABRIANO (Gentile da), painter, IX. 464.

Italian city, IX. 464. FABRICIUS (George), poet, IX. 464. — (Jerome), Acquapendente, IX. 464
—his anatomical discoveries, II. 760 on surgery, XX. 818. (JOANNES ALBERTUS), IX. 464 (JOHANN CHRIST), entomologist, IX. 465, 466—merits of his system, III. 188—on the crustacea, VII. 540—on entomology, IX. 33 et seq. (John), on the sun's spots, IV 25. (Otho), on the insects of Greenland, IX. 63—on ornithology, XVI. 729—on the ovum of Boroe, XXI 1000.

FABROT (Charles-Annibal), IX. 466

Fabry (Honoratus) on aeronautics, II. 168
FABYAN (Robert), IX. 466
Façade, in architecture, III. 509. FACCIOLATI (Jacopo), IX 466

Face, constituent parts of, III 1-bones of, 21—its general properties, 29— muscles of, 39—bones of, in the mam malia, 78; XIV. 133-in birds, III. 85. Face-bedded work, in masonry, XX 718
FACIAL ANGLE, IX. 466; III. 30, 79, XIV.

137, n. L. bones, in brutes, III. 78.

FACIES HIPPOCRATICA, IX. 466. FACTION, IX. 466. FACTOR, IX. 466. See Agent.

- m arithmetic and algebra, IX. 466; III. 585; II. 491-binomial factors, IX.

FACTORY, IX. 468—cotton factories in Lancashire, VII. 451; XIV. 252; m Scotland, VII. 451; in United Kingdom, 454; XIV. 286, 288—persons employed in factories, VII. 454; XIV. 289

### FAC-FAI

-horse-power employed in, 288-condition of females in, 280-economy of, 281-influence of labour in, on intelligence and health, 279; on the wellbeing and opinions of the operatives, -weekly earnings of workers in, 253 -in Lanarkshire, XIII. 175-factory acts, XXI 790-inspection of factories 791—returns, 792—meaning of the word in France, 793 See Manufactures FACTORY, in commerce, IX. 467

FACULÆ, in astronomy, IX. 467, IV. 28 et seq See Solar Spots

Faculties in universities, XXI. 475, et seq. FACULTY, IX. 467—organs of the faculties, in phrenology, XVII 562, 673—intel-lectual faculties, 562—combinations of, 564-theory and classification of, 566according to metaphysicians, 673—derangement of, XIV 529—obliteration and non-development of, 1b

Dean of, IX. 467; VII. 689

Advocates

Fad, loch, VI. 25. Fænus, genus of insects, IX. 184. FAENZA, Italian town, IX. 467.

FAERNUS (Gabriel), IX. 467-his edition of Terence, XXI. 158

Fæsulæ, now Fiesole, Etrurian city, IX. 467-theatre at, 359.

FAGGING, in schools, IX. 467—at Eton, 355—evils of, XIV 444. - a mode of reaping, IL 313.

FAGGOT, IX. 467.

Fagnan (Count de), on fluxions, IX. 679. Fagus, beech-tree, IX 467. See Beech. Fahlberg's observations on the Gymnotus electricus, VIII 575. Fahlore, XV. 120

Fahlun, copper and iron mines, XV. 239; XX. 862

Fahlunite, mineral, XV. 89. FARRENHEIT (Gabriel Daniel), IX. 467his aræometer, III 391—his thermometer, IV. 457; XXI. 222, 223—his hydrometer, XII. 86.

FAIENCE, IX. 467. Fairo, town of Cochin-China, IX. 468; VII. 49.

FAINTING, IX. 468. See Syncope. Fairbairn (W), his assistance to Mr Stephenson in erecting the Mensi tubular bridge, L 877—experiments on the strength of iron, XIL 566, 567, 569, 571, -his iron-steamers, XX. 137, 174on the strength of iron plates, 175-of rivets and riveted joints, ib., 176-on the strength of iron beams, 177-on the resistance of iron to bulging force, 182 his double-flued boiler, 354-on the prevention of smoke in furnaces, 355on the law of density of steam, 572his description of the steam-engines erected by him at Saltaire Mills, 603on the collapse of steam-boiler flues, 616-his plan for strengthening flues, 634 on the rupture of boilers, 635 on

the strength of materials, 780, 781. FAIRFAX (Edward), poet, IX. 469—his translation, XXI. 35.

- (THOMAS, LOTd), IX. 469; V. 404 et seq —defeat at Atherton Moor, 404.

(Lord), XXI. 742.

FAIRFORD, town in Gloucestershire, IX. 471.

FAIRIES, IX. 471-still believed in, in some parts of Britain, I. 464

of the mine, IX. 471—fairy circle,

or rings, ib.; V. 100, XX. 839. FAIR-ISLE, IX. 469; XX. 118 FAIRS AND MARKETS, IX. 468-Edinburgh,

VIII. 405—France, X. 268—Falkiik, IX. 474—of Leipsic, XIII. 325—Germany, X. 590-Glasgow, 655-Hindustan, XI. 459—Hurdwar, XII. 49—Hungary, 17-Nijni-Novgorod, XVI 267 Fairy, screw steam yacht, description of, XX. 665

Tales, XIX. 287.

FAITH, IX. 471—in theology, 471; I. 522—impropriety of making a certain faith necessary for avil privileges, 534. - (St), fairs at, IX. 468.

### FAI-FAN

Faizábád, town in Oude, XVIL 18 FARENHAM-LANCASTER, in Norfolk, IX.

Fakhr-ed-Dîn, XX. 268, 270 FAKIR, a religious mendicant, IX, 472-Fakur's houses, XL 469. FALAISE, French town, IX. 473

Falasha, or Talashas, people of Abyssinia, IX. 473, IL 56 FALCATED, IX. 473

Falcinellus, genus of birds, XVL 804 Falco, genus of birds, XVI 745. Falcon, IX. 473; XI 248, XVI 745 Falconidæ, family of birds, XVI 740 FALCONER (William), IX. 473-poetry of, XVIII. 124.

(Dr), on the pleistocene fossil mammalia, XV 216 FALCONEY, IX. 473; XL 247; XX. 209,

210 Falcunculus, genus of birds, XVI 748
Faldermann (F), his works on insects, IX. 20

Falerii, Etruman city, IX. 473 Falernian wine, XXL 882 FALERNUS AGER, in Campania, IX. 474 FALEURE, IX. 474—battles of, V 461; XIX. 755; XXL 686—fairs, or trysts at, IX. 468; XX. 708—iron-works, 704

-carse of, VL 276 FALKLAND, town in Fife, IX. 474-palace of, 1b

- ISLANDS, IX. 474; V 242-flora of, 228, XVII. 629-dispute regarding them between Britain and Spain, V. 470 -tussac grass of, IL 330.

- (Lucius Cary, Lord), VL 306death of, V 404.

FALL, Scotch measure, IX. 475. OF MAN, IX. 475; II. 123—narra-tive of, in Genesis, considered as a mere allegory, XXI. 198-man's present state

- RIVER, town in Massachusetts, IX.

of the leaf, V. 109
FALLACY, IX. 475, XIII. 613, n. Fallen (C F), his entomological works, TX. 12.

Fallenia, genus of msects, IX. 233 FALLING OF SHOOTING STAT, IX. 479, 557; VIII. 588; XIV. 688. See Meteorolite. FALLING-SICENESS, IX. 479, 275 See Epilepsy.

FALLOPHO (Gabriello), IX. 479; III. 71.
FALLOPHO (Gabriello), IX. 479—his anatomical discoveries, II. 759, 761 Fallow-deer, XIV. 207-shooting of, XX.

Fallowing, in agriculture, IL 289—summer or naked fallow, 291—Tennant's system of winter fallowing, 290-12gfallowing, 307.

Fallows (Rev. Fearn), his pendulum ob-servations, IX. 573, 574—astronomer at the Cape of Good Hope, III. 818. Falls, in hunting, IX. 683.

FALMOUTH, in Cornwall, IX. 479. - m Jamaica, XII. 680. Falsehood, XV. 566

Falsequarter, XXI. 562. Falster, island in the Baltic, IX. 479 Falterona (Mount), in Tuscany, XXI. 392. FALUN or Fahlun, Swedish town, IX. 479

—copper mines, XV. 239, XX. 862. Falx of the dura mater, III. 56. FAMA, goddess, IX. 479. - CLAMOSA, IX. 480

FAMAGOSTA, town in Cyprus, IX. 480, VIL 610. FAMILY, IX. 480.

- in natural history, IX. 480; V. 175; XV. 67, 68.

Famine at Antioch about the year 331, III. 274—in India, XI. 453—in Egypt, VIII. 478—Ireland in 1846, IX. 629— Italy in 1347, XIL 650.

FAN, IX. 480—fan-palm, V. 214 Fanariots, IX. 14. FANATICISM, IX. 481.

FANCY, IX. 482-poetic, XVIII. 93, 94 See Taste, Apparitions. Fane (Sir Henry), XL 667.

#### FAN—FAR

Fangs of serpents, III. 113; XIX. 44-of a tooth, XVL 439. Fanin (Father), VII 680. FANIONS, IX. 482. FANNERS, IX. 482; II. 283, XVIII. 87. Fano, city in Papal States, IX. 482.

island, XII 451. FANSHAWE (Sir Richard), IX. 482. FANTASIA, in music, IX. 482.

Fantees, III 275. Faraday (Michael), I. 977—his early history and connection with Davy, ib -variety of his publications, ib -his researches on electricity, ib -on electro-magnetic rotations, ib, 975—on the identity of electrical and chemical forces, 978 on the uniform nature of electricity from whatever source, 979-volta-electrical induction, ib.—his discovery of dia-magnetism, 980—on the magnetism of oxygen, 981-on the optical changes induced by magnetism, ib-liquifies certain gases, 982-his wide reputation, ib —his electrical discoveries, VIII. 532 -discovery of magneto-electricity, ib, I. 979-his new law of electrical conduction, VIII. 533, 542, I. 978—his theory of statical electricity, VIII. 533 on the electricity produced by friction, 539-on the velocity of electricity, 543 -on the distribution of electricity, 552 on the pyro-electricity of oxalate of lime, 561—on the electricity of the solar rays, 569—on the gymnotus, 576—on electro-chemical decomposition, 596, I. 978-on Mr Barry's experiments, VIII 597-on electro-magnetism, 601-his improvements on the electrophorus, 607 his experiments with an insulated wire, 613-his instructions for using electrometers, 617-on magnetic metals, XIV. 16-on para and dia-magnetism, ib, 30—on the variation of the needle, 68—on filtration, IX. 582—his analysis of tea-growing soils from China, XXI. 84—his voltaic trough, 612—his volta-meter, 619—on the difference between ordinary and voltaic electricity, 621on electric conduction, 622 - on the chemical effects of voltaic electricity, 628-his further researches, 629, 630on magnetic electricity, 644, 645, 646 FARCE, IX. 482.

FARCY, a disease in horses, IX. 482; XXI.

Fardlebound, a disease of cattle, XXI. 567 FAREHAM, town in Hants, IX. 482. Falel, reformer, VI. 109, 110.

FAREWELL, cape, IX. 483; XI. 38 et seq Farey's chiptograph, VIII. 639. Fargeau (L de St.), his works on insects,

IX. 13. FARINA, IX. 483

Fario, genus of fishes, XII. 245. Farionella, genus of fishes, XII. 248

FARM, IX 483; IL 364 et seq —capital required for, 366—number of farms in Britain, IX 483—in France, X. 249 size of, II. 364—size of English, VIII. size of, II. 884-size of Englash, VII. 513-small farms increase the price of raw produce, VII. 429-large and small farms compared, 428-in Prussia, XVIII. 665.

labourers, II 366, IV. 680.

buildings, II. 267, 371—house, 268

-cottages, 1b

FARMER (Hugh), IX. 483. (RICHARD), D.D., IX. 483. Farmers, education of, II. 366—clubs, 265 Farming of taxes, XXI. 42, 43. Farnable (Thomas), IX 488.
Farnese (Cardmal), VI. 227.
—— PALACE, IX. 484; III. 452, 479,

FARNHAM, town in Surrey, IX. 484-Royal Military College at, IL 71-its hops, XX. 836.

FARNOVIANS, heretics, IX, 484. FARO, Portuguese town, IX. 484. - cape, in Sicily, IX. 484.

game with cards, IX. 484.

FAROE, islands, IX. 484; VII. 745—Faioese ballads, IV. 397.

M

FAR-FAY Faroelite, mmeral, XV 75 FARCHAR (George), dramatist, IX. 485; VIII. 162, XVI 172. Farquhaison (Rev. James), on aurora boiealis, IV. 245, 248 Farr (Dr), on life assurance, XII. 399, 402 -on medical jurisprudence, XIV. 424 -on vital statistics, XVIII 837 Farren (E James), on life contingencies, XIL 396, 398 FARRIER, IX. 485. FARRIERY, or veterinary science, IX. 485, XI 671; XXI 554 FARRINGDON, GREAT, in Berkshire, IX. 485. FARRINGDON, GREAT, III BERSHITE, IX. FARS, or Farsistan, in Persia, IX. 486 Farshoot, in Egypt, VIII. 424 FARTASH, cape, IX. 486.—67 gold, VII. 77. FARTHINGALE, IX. 486 FASCES, IX. 486 Fascia, IX. 486—in anatomy, II. 824—in architecture, IX. 486; III. 509. Fascicle, in botany, V. 117. FASCINATION, IX. 486. FASCINES, IX. 486, 804. Fasciola, genus of entozoa, XXL 980. Fashion, IX. 486—its effect on taste, FAST, IX. 488, II. 51, III. 180; VIII. 22 -Mohammedan fasts, XV. 303-in the Greco-Russian church, XIX, 527-death from fasting, XIV 430. FASTERN'S EVE, IX. 489. FASTI, IX. 489-Dies fasti, ib. FASTOLEF (Sur John), IX. 489
FAT, IX. 490, II. 788; XVI. 492, VI
510; XVII 655—tissue containing, II 787—fatty degeneration, XVII. 690, 696—consumption of, in the Polar regions, 658-alimentary qualities of, VIII. 20in msects, IX. 50.

or fatty matter, of plants, V. 73;
IX. 756, II. 381.

or Var, IX. 490. FATA MORGANA, IX. 490—in the great Hungarian plain, XII 10—in Antrim, III. 285—F. glacialia, XVIII. 168, n. See Mirage. FATALIST, IX. 490. See Predestination. FATE, IX. 490 FATES, IX. 490, XVII. 272. FATHEMITES, OF Fatimites, IX. 490
FATHER, IX. 490 See Parent. in theology, IX. 490.

FATHERS, in the primitive church, IX. FATHOM, IX 492 Fatio de Duillier, IX. 672 Faugher, battle of, XIL 470 Faujasite, mineral, XV. 77. Faults in rocks, XV. 171, 176, 177; XVIL FAUN, IX. 492. FAUNA, in mythology, IX. 493; V. 4. - in natural history, IX. 493. FAUNALIA, rural festival, IX. 493.
Faure (M.), on the cabinet of medals at Madrid, XIIL 409. Faust, magician, X. 362. Faustin I., emperor of Hayti, II. 708; XI.

FAUSTINA, wife of Marcus Aurelius, IX. 493; XIX. 844, 345; XIII. 279. FAUSTUS, IX. 493. See Fust. Favé (Captain), on the emperor of the French's system of artillery, XL 140-

on the origin of gunpowder, 151. FAVERSHAM, town in Kent, IX. 493-James II. at, V. 438. FAVIGNANA, island, IX. 493; XX. 246.

FAVISSE, IX. 493. FAVONIUS, IX. 493.

FAVORINUS, sophist, IX. 493. Favostidæ, XXI. 1006-fossil, XVII. 96,

Favre (M), on the heat of combustion of coal, XX. 630. FAWKES (Francis), IX. 493.

———— (Guy), his connection with the gunpowder plot, V. 385. FAWN, IX. 493—colour-dyeing of, VIII.

Fay (M. du), on dew, VII. 766, 767, 769.

#### FAY-FEL

FAYAL, one of the Azores, IX. 493; IV. 336. Fayalite, mineral, XV 89 Fayette (Marquis de la), V. 483. Fayoum, in Egypt, IX. 493; VIII 503 FE, Fo, or FOHI, Chinese god, IX. 493, VII 243, 717—religion of, XV. 761, 762, VI 569 FEALTY, in feudal law, IX. 493

FEAR, IX. 493-its tendency to make nations take excessive precautions against enemies, VII 145 — monomania of, XIV. 531.

Fearnall (Mr), his steam-boats, XX 137. Fearn (Mr), on electric vibrations, XXI. 631. FEAST, or Festival, IX. 494—feasts of the ancients, ib —church feasts, VL 89 dancing at, VII 645-religious festivals of the Egyptians, VIII. 443, 448

Featham (Messrs), their stoves, XX. 743. Feather ore, XV 119—feather-grass, XIX. 515

Featherings, in architecture, III 509 FEATHERS, IX. 495; XVI. 735—uses to man, IX. 496—plucking of, XIII. 491 collectors of, Galway, X. 391 FEBRIFUGE, IX. 496.

FEBRUARY, IX. 496—gardening calendar for, XI 758 Feburier's hive, III. 295.

Ficamp, French town, IX. 496 Fechner's experiments on Ohm's theory of electrical conduction, L 984. Feciales See Fetiales

Fecundation of germs, XVII 683 Fecundity of the queen-bee, IV. 583. FEDERAL, IX. 496. FRE, in law, IX 498

Feeding of live stock, IL 339, 418-of milch cows, VII 621

FEEJEE ISLANDS, IX. 499; XVIII. 273 inhabitants of, 274, 275; IX. 347. Feeling, Dr T. Brown's application of the 575—weak in insects, III. 177

Feelings, arrangements of, in phrenology, XVIL 562.

Fehmic courts, XXL 532 Fehrbellin, battle of, XVIII. 649. Feilitzsch (Prof), on hydraulics, XII. 155. Feirings, in ploughing, IL 286. FEITH (Rhynvis), Dutch poet, IX. 499. Felahi, VIII. 107

FELEGYHAZA, in Hungary, IX. 499. FÉLIBIEN (André), IX. 499

- (Jean François), IX. 499 FELICITAS, IX. 449 Felicudi, island, XIII 502. FELIS, genus of quadrupeds, IX. 499, XIV.

168—bones of the foot in this genus, III 82-organs of the voice, 101-dentition XVI. 459—fossil species, XVII 171. Felix (M. Minucius), IX. 499.

name of several Roman pontiffs, IX. 499.

V, II. 644. Fell (Bishop), his abuse of Hobbes, XI. 550. Fellatas, XL 776, 779; II. 222; V 51. FELLENBERG (Emmanuel von), IX. 499 his school at Hofwyl, XVII. 477 Felling of tumber, VIII. 210; XX. 170; XXL 278.

FELLOW, in colleges, IX. 500; XXL 456. See Universities

Fellows (Sir Charles), his researche sin Lycia, III. 503-on the coins of Lycia, XVI. 377.

Felo de se, IX. 500. See Suicide. Felox, in law, IX. 500—ancient punishment of, XIL 379. FELONY, IX. 500

Feloo, cataract of, XX, 49. Feloops, African nation, IL 222; IX. 352, FELSPAR, IX. 501; VI 481; XV. 70 amorphous, 72—changes in the decom-position of, II. 390—analysis of, 389. Felspathic lavas, XV. 132—traps, 134—

ash, 135. Felstone, XV 134—columnar, 166—relations between it and greenstone, 189. FELT, IX. 501.

FELTHAM (Owen), IX. 501.

FEL-FER

Felting, VIII. 275; X. 350, XI. 240, 241—distinguished from weaving, XXI 780

Felton on Dryden, VIII. 203.

assassin of the Duke of Buckingham, V. 392.

FELTRE, Italian town, IX 501. FELUCCA, IX 501, IV. 800. Female See Woman

FEMERN, Island, IX. 501. FEMININE, in grammar, IX. 501; X. 747.

FEMME COVERT, in law, IX 501
Femmi, or thigh-bone, III. 34, 36—in the mammaha, 82-in biids, 80-in reptiles,

Fen, IX. 501; II. 362, IV 567—fen country of Cambridgeshie, VI 114 of Lincolnshire, II. 363, XIII. 491-of Suffolk, XX. 790

FENCES, IX. 501; II 269-in hunting, XI 678-for gardens, 698, XVII 773. FENCE-MONTH, IX. 501

FENCING, IX. 501.

FENELON (F de S de Lamotte), IX. 505his works, I. 83-his character contrasted with that of Bossuet, 351controversy with Bossnet, ib, V. 60; XV 758-his character, I. 83, 351-why distrusted by Louis XIV, ib -his adoption and defence of Madame Guyon's opinions, XL 163; L 352-his banishment from the court, and condemnation by the pope, 1b. Fenestrella, XVII 98, 96.

Fennec, in zoology, XIV 165. Fennel, V. 137, 195; XL 745 FENTON (Sir Geoffrey), IX. 509.

(ELIJAH), English poet, IX. 509—his

share in Pope's version of the Odyssey, XVIII, 330.

Fenugreek, yellow dyestuff, VIII 297. FEOD, or Feud, IX. 509. See Feudal law. Feodor, reign of, XIX. 476. - Ivanovitch, XIX. 474.

FEOFFMENT, in law, IX. 509
Ferae, order of mammalia, XIV. 135, 146 FERALIA, Roman festival, IX. 509. FERDINAND, IX. 510.

- Prince of Saxe-Coburg, XVIII. 390. Ferdinand and Isabella, IX. 510, XX. 465—their agreement with Columbus, VIL 157-their expulsion of the Jews from Spain, XII. 781—Prescott's history of, XVIII. 503, 504.

- IL, emperor of Austria, IV 303. IV., king of the two Sicilies, XX. 260, 264

III, king of Leon, XX, 463 IV., of Castille and Leon, XX. 463. VI, of Spain, XX. 471.

VIL, of Spain, XX. 472. Ferdousi. See Firdust. FERE (La), French town, IX. 510. FERENTARII, Roman troops, IX. 510; III.631. FERENTINUM, Etrurian city, IX. 510.

- a city of the Hernici, IX. 510 FERETRIUS, surname of Jupiter, IX. 510. FERG (Francis Paul), IX. 510. Ferghana, XIII. 77.

Fergus, river, VI 753. FERGUSON (Adam), LL D., IX. 510—on the history of language, L 176—on Dr Reid's works, 219, n. 1.

(JAMES), IX. 512 (ROBERT), poet, IX. 512. (Robert), "the plotter," VII 631. (Robert), of Raith, his observation

on subterranean temperature, VI. 768. Fergusonite, mmeral, XV 110
Ferguson (Mr), on Assyrian architecture,

III. 501, 502—his restoration of a Ninevite palace, XVI. 277. FERLE, IX. 513-Latinæ, 1b.

FERISHTA (Mohammed Casim), IX. 513. FERMANAGH, IX. 513-effects of the cottage-system in, VII 431-land under crop, XII. 516-cereal produce, 517.

FERMAT (Pierre de), IX. 516, 671 - his method of drawing tangents to curves, I. 561—on refraction, 628—his edition of Diophantus, II. 488—his disputes with Descartes, VI. 279-on probability, XVIII. 588.

### FER-FEU

FERMENTATION, IX. 517-panary, IV 380 -in brewing, V. 329-in distillation, VIII 49-influence of electricity on, 597 -combustion from, XIV 427-in winemaking, XXI 883, 888, 889

FERMO, Italian city, IX. 517-delegation of, XVII, 943

FERMOY, town in Cork, IX. 517 Fern order of plants, V. 216. See Ferns and Filices FERN ISLANDS, IX 517

Fernand (John), blind author, IV. 799 FERNANDO DE NORONHA, ISland, IX 517. FERNANDO Po, Island, IX 517, II 229; IV. 653.

Fernel, measurement of arc of meridian by, L 618, IX 548

- JEAN (FRANÇOIS), physician, IX. 518; XIV. 459.

FERNEY, village in Gex, the residence of Voltaire, IX. 518; XXI. 660
FERNS, IX. 518, V 143, 216—tree-ferns,

84—their proportion to phænoge-mous plants, XVII. 626—work on, in nature-printing, XVIII 555—in Cape Verde Islands, XXI. 544—fossil, V 284 See Filices

Feroe Isles, IX, 518 See Faroe. FERONIA, goddess, IX. 518 - genus of insects, IX. 90

Feroniens, section of coleoptera, IX 92 -synoptical table of, ib FEROZEPOOR, town in Hindustan, IX. 518 FEROZESHAH, in Hindustan, IX 518-

battle of, ib , V 670; XI 509. FEROZPOOR, town in Hindustan, IX. 518 Ferrar, on the "palatines" of Ireland, XII

FERRARA, city in the Papal States, IX. 518 - legation, XVII. 243-hbrary of, XIII. 413-university of, XXI 492 Ferrari (Lewis), his discoveries in algebia,

II. 485-on equations, IX 306. FERRARS (George), IX. 519. Ferrerius (J.), V. 254, m. 1. FERRET, IX. 519; XIV. 157

- in glass-making, IX 519. Ferreus (Scipio), his improvements in algebra, II. 484.

Ferriar (Dr), on apparitions, III 316 et seq —on Sterne's plagiarisms, XX. 693. Ferric acid, VI 489.

Ferrier (Prof.), Coleridge accused of pla-giarism by, VII. 111—on the Pytha-gorean doctrine of number, XVII 232, n. (Miss), her novels, XIX. 283

(Mr), his account of Persia, XVII. 419 et seq. FERRO, one of the Canary islands, IX. 519;

Ferrocyanic acid, calico printing with, VIII.

319 FERROL, town in Spain, IX. 519—harbour of, X. 372.

Ferrotype, XVII. 550. FERULA IX. 519-F. Græca, plant, VII 610.

Ferussina, fossil mollusks, XVII 110, 111 Ferussac (Baron), on the mollusca, XV. 327 et seg, 373.

Fersalite, river, VIII. 818.
FESCENNINI, IX. 519—place whence Fescennine verses received the name, 360.

FESS, in heraldry, IX. 519; XI. 328. FESTI DIES, IX. 519. Festimog, in Wales, XIV 543, 544. Festival. See Feast.

FESTOON, in architecture, IX. 519

FESTUS (Sextus Pompeius), IX. 519. FETHARD, town in Ireland, IX. 519. FLTIALES, or Feciales, IX. 520; VI. 756. FETICHE, IX. 520; VII 246.

FETLOCK, IX. 520; XI 641, 648 et seq. Fettbol, mineral, XV, 84. Feu, in Scots law, IX. 520.

FEUD, IX. 520 FEUDAL LAW, IX. 520—Sir Thomas Craig

on, VII. 478. system, XV. 681-origin of the,

IX. 520-agriculture under the, II. 251 —armies, III. 635—effect of the cu-sades on, VII. 531; II. 251—its in-fluence on poetry, XVIII. 107—origin

### FEU-FIE

of prisons from, 566-present system of taxation arose out of the decline of, XXI, 37.

Feullants, X. 66

FEVER, IX. 526; XVII. 690-prevalence of, in marshy districts, IV. 184-at Gibraltar, X. 619—Dr Rush on yellow fever, XIX. 466—fever in veterinary science, XXI, 555

Feversham. See Faversham. FEVRE (Tannegui Le), IX. 526. FEZ, in Africa, IX. 526; XV 595 FEZZAN, in Africa, IX. 527; II. 219. Ffennell (Mr), on Insh fishenes, IX. 620, 622

Fiacre, VIL 42 FIARS PRICES, IX. 532—in Edinburghshire.

VIII. 409. Fiber, genus of mammalia, XIV 183. Fibre, IX. 538—fibres of the human body, II 777—vegetable, V 69; IX. 635; chemical properties of, VI 515, 516— colours of fibres, XVI 622—fibres for

micrometers, XIV. 744-tissues of, XVII. 652 textile. See Textile Fibres.

FIBRIN, IX. 533, 757 -- liquid, II. 780its qualities as an aliment, VIII 18 Fibrine (animal), IL 381; IX. 757; XVIL 654; XIX. 610. (vegetable), IL 381; VL 519;

XIX. 610. Fibro-cartilage, II. 832-of the vertebræ,

III. 5. Fibroferrite, XV 97.

Fibrolite, mineral, XV 86

Fibrous system of the human body, II. 824, 825,

- tissues of animals, III 171, XVII. 652-strength of fibrous bodies, XX. 755.

FIBULA, IX. 533; III 35, 36, 37—in the mammalia, 82—in birds, 86—in reptiles, 89

FIGHTE (Johann Gottlieb), IX. 533; XI. 282-his system of philosophy, XIV 606-his classification of duties, XV. 565—on lies of necessity, 572—on the meaning of the pronoun I, I. 200.

FIGHTELGEBIRGE, mountains, IX. 536; X.

Fichtelite, mineral, XV. 125.

FIGINO (Marsilio), IX. 586—his versions of Plato and Plotinus, XVII, 522 Ficoideæ, nat. order of plants, V. 194.

FICTION, IX. 537-works of. See Novel, Romance.

Ficula, genus of mollusks, XV. 387-F. lævigata, ib. Frcus, genus of plants, IX. 536; V. 206.

Fm, IX. 537. FIDDES (Richard), IX. 537

FIDELE, IX. 537. See FIDE-JUSSOR, IX. 537. See Violin.

FIDEI-COMMISSUM, IX. 537 Fidele (Fortunato), on legal medicine, XIV. 422

FIDENÆ (now Castel Grubilio), IX. 537. FIDES, IX. 537.

Fieber (F. X.), his works on insects, IX. 23

FIEF, IX. 538. See Fee.

FIELD (JOHN), IX. 538. in heraldry, IX. 538; XI. 324—in numismatics, XVI. 353.

- Marshal, IX. 538; XIV. 318. - Officers, IX. 538.

(H. W.), his assaying furnace, III. 769.

artillery, III. 688. of the cloth of gold, VIII. 698. - operations in trigonometry, XXI. 346

Field-fare, bird, XVI. 751-shooting of, XX. 216.

Field-sports, their influence on the character, XII. 33; and on the health, rb. Field-works, IX. 805, 808.

FISLDING (Henry), IX. 538-his criticism on the law of evidence, 418—his tomb at Lisbon, XIII. 507—on the causes and impunity of crime, XVIII. 192—his plan of police, 1b .- merits of his novels,

#### FIE-FIL

XIX. 272-his strictures on Richardson.

Fierasfer, genus of fishes, XII. 268 FIERI FACIAS, in law, IX. 543. Freschi, his plot, trial, and execution, X.

Fresole, Italian city, IX. 543, 467 FIFE, musical instrument, IX. 543.
FIFESHIRE, IX. 543—ferries on the Forth, 796-agricultural statistics, XIX. 796. 797, 798—population, 799—trigonome-trical survey of, XXI 333

FIFTH-MONARCHY-MEN, IX. 546; V. 416; XIII. 165.

FIGEAC, French town, IX. 546 Figget whins, irrigation of, XIL 620. Fighting fish, XIL 289.

Figites, genus of insects, IX. 192 Fig-mangold order of plants, V. 194. Fig-shells, XV 387

Fig-tree, IX. 536, V. 206—culture of, XI. 708—fig-house, 729. Figs, IX. 536-value of imports of, VIII.

FIGUEIRA, Portuguese town, IX. 546. Figueiredo (Jorge de), V 280 Figueiras, Spanish town, IX. 546

Figure, perception of, XIV. 573 FIGURE OF THE EARTH, IX. 547; III 805, 812; IV 5; VII 700, I 617, 836, 850, 853; X. 465, 479-no accurate in-

formation of, derived from antiquity, I 617-attempt of Eratosthenes to measure an arc of meridian, ib -first modern measurement of any accuracy by Snellius, 618-measurement of an arc by Norwood, Fernel, and Picard, 1b-Richer's observation that a pendulum vibrates slower at the equator, 619explanation of this by Newton and Huygens, ib -determination of, by Newton, 677-measurements by Cassim and Fontenelle, 685-Maclaurin's view 772-measurement of degrees of latitude under the equator and within the arctic circle, 772, 773; V 243; VII. 229; I 853, 854—measurement of a degree of latitude by La Caille, 774 by Delambre, Mechain, &c., 775-vari-ous estimates of the amount of depression at the poles, 776-measurement of a perpendicular to the meridian by Brousseaud, 1b—as determined by the pendulum, 1b., 850, 851—Ivory's estimate of the earth's elipticity, 777 analytical investigation to determine the earth's figure by Clairaut, Legendre, and Laplace, ib; III 812—the demonstration completed by Ivory, I. 777discussions on the earth's figure led to an examination of the theory of the tades, 778-French arc of mendian, 836 -English arc, 837-connection of gravity and the figure of the earth, 851-Indian arc, 853-Russian arc, 854-va-

rious proofs of its ellipticity, ib .- Frisi on, X. 312 See Trigonometrical Survey. Figure-stone, XV 84. Figure-weaving, XXL 780, 785, 787. Figures, in geometry, X. 507-proportions

m rhetoric, XIX. 132, VII. 220. Figwort, order of plants, V. 202.
Fiji islands, XVIII. 273. See Feejee.
FILAMENT, IX. 576—in botany, V. 118,

126-filamentous tissue of the human body, IL 777, 786 See Fibre.

FILANGIERI (Gaetano), political economist, IX 576; L 287; XXI 582.

(General), his expedition against Sicily, XIL 657

Filaria, genus of entozoa, XXI 981-in the domestic animals, 574, 578 FILBERT, IX. 577; XVI. 395-in Kent,

XIII 67. See Hazel. File, IX. 577—file-cutters, diseases of, XX. 98.

File-fish, teeth of, XVI. 421. FILIAL PIETY, IX. 577—duties, XV. 568. FILIBEG, IX. 578.

FILICAJA (Vincenzo da), poet, IX 578; XVIII. 112.

#### FIL—FIR

Filices, or ferns, nat. order of plants, V 216-organs of reproduction in, 143embryogeny m, 156 FILIGREE, IX. 579--work, of Sumatra, XX.

805 FILIPPO D'ARGIRO (San), town in Sicily,

IX. 579 Filistata, genus of arachnides, III. 378.

See Filigree. Fillagree. FILLET, IX. 579—in achitecture, III 509

-m jomery, XII 808 Fillmore (Millard), president of the United States, XXI 442, 796. FILTER, IX. 580

FIN, IX. 583; III. 90; XII. 206, 215-in fossil fishes, 333-in the cetacea, XIV. 216.

FINAL CAUSE, IX. 583; III. 540; XVII.

FINALE, Genoese port, IX. 583.

FINANCES, IX. 583, Finati (Giovanni), on Arabian ballad-singmg, IV. 396.

FINCH (Heneage), earl of Nottingham, IX. 583

- (Sir John), V 393 tribe of birds, IX. 583; XVI 761

Fincham, on ship-building, XIX. 161, 163 —on the seasoning of timber, 168—strength of timber, 172

FINDHORN, river, IX. 583; XV. 576, 772 FINE, in law, IX. 583.

FINE ARTS, IX. 584—exhibition of works in the, 453. See Arts, Painting, Sculpture, &c.

Fincering See Veneering. Finfoots, birds, XVI 809

FINGAL, king of Morven, IX. 584; XIL 464; XVII. 5, 6. in Tasmania, gold found at, XXL

FINGAL'S CAVE, IX. 584; XV 190; XX.

Finger-alphabet, VII 679

Fingers, bones of, III 28-joints of, 34muscles, 38-motions, 40-opposition of the thumb to, 41-calculation by, II. 8 -cases of supernumerary, XV 503

and toes, a disease of turnips, IL 319; V 78—effects of lime on, IL 319 FINIAL, IX. 584; III. 509

FINISTERE, or Finisterre, in France, IX. 584; V. 316

Finlaison (John), his tables of mortality and annuities, III 204; XII 401—on mortality, XV 614.

FINLAND, IX. 584—ceded to Russia. XIX 494; XX. 859—poetry and mythology of, XIX. 701-education in, 532-525, n 2-tables of mortality, XV. 645, 646, 647. See Finns.

GULE OF, IX. 585; IV. 402, 404 Finlayson's harrow and grubber, II. 272. Finmark, XIII. 233-Laplanders of, 237. Finnan haddocks, IX. 647, 769; XIII 89 Finns, VL 364; IX. 388, XIII. 237; XIX. 522, XX. 864

Finnish language, IX. 389, 390; XIII 215 -has many words in common with the

American languages, II. 680, n. Finsbury, borough of, XIII. 660. Finzel (Mr), on sugar-making, XX, 794,

Fiords, XVI. 319-in Lapland, XIII. 235 -Finland, IX. 584-Scotland, XIX. 794. FIORENZUOLA, Italian town, IX. 585.

Fir., IX. 585—pollen, V. 129; seed, 139, embryo, 142; cone, 139—propagation of, by seed, XVIL 767-trees, 756, 760, culture of, 770-distinction between firs and pines, XXI. 274.

Balm of Gilead, V. 209. tribe of plants, V. 209.

Fir-rape, order of plants, V 198.

Fir-timber, XXI. 274—Scotch fir, 275— spruce, ib.—sapwood in, 1b—defects of, ib—its use in jomery, XII. 817—specific gravity of, 89—frigate built of, XVI 101—mode of preserving, XX. 168 shrinkage in seasoning, ib -strength of, 171, 172, 757, 758.

FIRDUSI, Persian poet, IX. 585, XVII

### FIR-FIS

Fire IX. 586-natural fire at Baku, IV. 382: wild or Greek, IX 586-domestic fires, XX. 353-great fire of London, V. 424, XIII. 659, in Rome, XIX. 261 -of St Elmo, VIII 588-security of buildings against, VII 329 See Combustion, Flame, Heat.

- Insurance, XII. 416-offices, 417duties paid by, in 1855, 418-its progressive increase, ib -- practice of, ib. - of artillery, different kinds of, XI.

- ST ANTHONY'S, IX. 587, 329 See Erysipelas.

Fire-annihilator, XIII 438. FIRE-ARMS, IX. 587-effect on war of the great improvements in, XXI. 725. See Gunmaking.

FIRE-BALLS, meteors, IX. 586; VIII. 587.

Fire-bricks V 345
Fire-clay, XV 142—analysis of, IL 391.
FIRE-DAMP, IX 587, VI 643, 671; XIV. 436-explosions in collieries from, VIL

194 FIRE-ENGINE, IX. 587; XIL 177—in London, XIII. 679—fire-engine companies.

in New York, XVI 231 FIRE-ESCAPES, IX 587; XIII. 437

FIRE-FLIES, IX. 587, 169—in Jamaica, XII. 682

Fire-opal, mineral, XV. 69. Fire-ordeal, XVI. 701

Fire-places, XIX. 613. See Chimney, Furnace, Smoke.

Fire-raising, or arson, III. 679; XIV 427. Fire-stones, XX. 712

FIRE-WORKS, IX. 587. See Pyrotechny FIRE-WORSHIPPERS, IX. 587; XL. 79, 92; XVIL 428

Fueblende, XV. 122 FIRKIN, a measure, IX. 587. FIRLOT, a measure, IX. 587.

FIRMAMENT, IX. 587. FIRMAN, IX 587 FIRMICUS (Maternus Julius), IX 588 Firmness, faculty of, XVII 563

Firola, genus of mollusks, XV 377. Firolidæ, family of mollusks, XV. 377. Firoloides Lesueuru, XV, 378. FIRST-FRUITS, IX. 588.

Firths, comparative amount of river and tidal water in, XVI 82. Fisc, in civil law, IX. 588

Fischer (L. H.), his work on insects, IX. 14, 24 - (T. B), his work on insects, IX. 14.

Fischerite, mineral, XV 74 FISH, IX. 588-acuteness of their hearing, II. 99-killed in Lapland by striking the ice, 100-as manure, 407-as an article of food, IX. 763-teeth of fishes,

XVI 420-ejected from volcanoes, III. 129—poisonous species, XIV. 439; IX. 763—rearing of, in ancient Egypt, VIII. 427-luminousness of, XIII 457-electricity of, VIII. 530, XVII. 636, 671--in heraldry, XI. 331, 333-supply to the London market, IX. 649—crystal-line lenses of, XIV. 771—preserved in glycerine, X 685-figures of, borne on arms, XI. 333-oil from, XVI 493ishes without teeth, 494—of Africa, II. 218—America, 714—New South Wales, 281—Canada, VI 148—Madeira, XIII. 800—Antrim, III 285—Devon-shire, VII 763—Hungary, XII. 17— Jamaica, 682-India, XI. 456-Iceland, XII. 203 - Java, 705 - Sweden, XX. 862-number of fishes known, XVII. 631-distribution of, 634-food of, 635

-fossil, 640, 115 et seq -- mode of fecundation, 683 See Ichthyology. FISHER (John), bishop, IX. 588; VIII. 700. - fur-skinned animal, X. 347.

FISHERIES, IX. 589-of Aberdeen, II. 33-America, V. 480-Antrim, III 286-Argylshire, 526—the Baltic, IV. 404—Banffshire, 413—Brazil, V. 299—Berwickshire, IV. 680—Caithness, VI. 62—Canada, 148—Caspian Sea, 312—Ceylon, 395—Chile, 550—China, 586—Clare, 755—Cornwall, VII. 408—Donegal, VIII. 105-Dorsetshire, 112-Downshire, 123

### FIS-FLA

Dublin, 215—England, 727—Firth of Forth, IX. 794, 795—France, X. 264— Holland, XI 586-Ireland, XII 522-1taly, 639 — Japan, 690 — Labrador, XIII, 140, 141—Lapland, 241—Lewis, ATII. 140, 141—Laphano, 221—Lews, 352—Malta, XIV 115—Mayo, 371—Hebrides, XI. 278—New Brunswick, XVI. 163—New York, 220—Norway, 327—Newfoundland, 171; V 482—Nova Scotta, XVI 344—of the Orkney Islands, 721 — Holland, XI. 583 — of Peterhead, XVII. 484 — Prince Ed-ward's Island, XVIII 518—Ross-shire, XIX. 427-Scotland, 804-Shetland, XX. 114—Sligo, 381—Sutherland, S42—Tuscany, XXI. 394—Vancouver's Island, 529—Waterford, 770—Wexford, 847— Wick, 857-Wicklow, 858-Yarmouth, 953. See Herring, Cod, Salmon, &c., Pearl and Whale Fishery

Fish River, Great, XVIII. 172, 175. Fisheries for crustacea, VII. 540

Fisherrow, XV. 744.
FISHERY, PEARL, IX. 650. See Pearlfisheries.

WHALE, IX. 650 See Whalefishery.

FISHGUARD, Welsh town, IX. 650
FISHING, IX. 650. See Angling, Fisheries. - in carpentry, VI 263.

Fishing-frog, XII. 311
Fishing-nets, XIX. 89 et seq.; IX. 609 et seq. See Nets.

Fishing-rod, IIL 150 Fissilabia, section of insects, IX. 103 Fissipedes, subdivision of crustaceæ, VII. 542

Fissirostres, family of birds, IX. 650, XVI. 757.

Firsuiella, genus of mollusks, XV 380 Fissurellidæ, family of mollusks, XV 380fossil, XVII 111.

Fissures in rocks, XV. 171, 174
Fistura, IX. 650; XX. 833—of the withers of animals, XXI. 558.

Fistularia, genus of fishes, XII. 305-fossil, 344.

- zoophytes, XXI. 985 Fistulida, echinoderms, XXI 983, 984 FITCH, a kind of vetch, IX. 650. See Vetch.

- or polecat, X, 348 FITCHY, in heraldry, IX. 650; XL 329 Fits in the domestic animals, XXL 574 Fitton (Dr), his encomium on Dr Wollaston, XXI. 901

Fittri, African lake, II. 215, 229. FITZ, IX. 650

Fitzgerald (Lieut Gov), his reports on Western Australia, IV 300.

(Prof.), on Bishop Butler, VI. 29

(Lord Thomas), his attack on Duhlın, VIII. 218.

(Vesey), V. 652. Fitzharris, Irish adventurer, V. 431. FITZHERBERT (Sir Anthony), IX. 650. - his works on agriculture, IL 254,

255. - (Mrs), V. 522.

FITZJAMES (James), IX. 650 See Berwick, Duke of.

Fitznigel (Richard), on the Exchequer, II 7.

Fitzroy (Sir C. Augustus), governor of New South Wales, IV. 274. - (Captain), on the canal across the

Isthmus of Panama, II. 711, 712—on Patagonia, XVII. 335 FITZSTEPHEN (William), IX. 650.

Flumara, outlet of the Tiber, XVII. 240

FIUME, in Austria, IX. 650
Fiumicino, outlet of the Tiber, XVII. 240 FIXED AIR, IX. 650; VL 471. See Carbonic acid gas.
\_\_\_\_\_stars, IV. 379. See Stars.

FIXITY, in chemistry, IX. 650.
FIXMULINER (Placidus), astronomer, IX. 650.

Fizeau (M.), on the velocity of light, XVI. 550, 552.

Flabellina, fossil shells, XVII. 94. Flabellum, fossil corals, XVII. 97.

#### FLA—FLE

FLACCES (Casus Valerius), Roman poet, IX. 651—Burman's edition, V 786 (Valerius), XIX. 321.

(Verrius), XVIL 519 Flacourtiaceæ, nat. order of plants, V 183. FLAG, IX. 651; II. 142—naval signals by means of flags, XVL 108; XXI 94, XX. 24, 25-to strike the, to heave out, to hang out the white, IX 651.

OFFICERS, IX. 651; IL. 142, XVL 102-full and half pay of, 109, 113prize-money, 114.

FLAGELLANTS, fanatics, IX. 651 Flagellations at Sparta, VII. 800. FLAGEOLET, IX. 652, XV 710. FLAIL, IX. 652

FLAMBEAU, IX. 652 FLAMBOROUGH-HEAD, IX. 652

FLAME, IX. 652, IV 791-of a candle, VI 171-hnes in the spectra of different flames, XVI 592—electricity of, VIII 567—Sir H Davy's researches on, I See Fire, &c.

FLAMEN, IX. 652 FLAMINGO, IX. 652; XVI 808
FLAMINIA VIA, IX. 652; XIX. 228, 308
FLAMINIUS (C), IX. 652—Circus of, VI 734
—defeat at Thiasymenus, 294; XI 209; XIX. 310

(T. QUINTIUS) IX. 652; XIX. 312 Flamma (M. Calpurnius), VI 288

FLAMSTEED (John), IX. 652-his improve ments in practical astronomy, III 803on the pole star, II 36—his catalogue of stars, IV 80, 95—on the longitude, XIII. 686-his projection, X. 493-Newton's opposition to, IX. 674—his attacks on Newton, XVI. 210—Sharp's assistance to, XX. 92, 93—on wheels, XVIII. 753-on iron beams, XX. 177, 178

FLANCE, or Flange, IX. 654. Flanches, in heraldry, XL 330 FLANDERS, IX. 654-commerce of, VII 187-manufacture of sal-ammoniac in, IL 721 See Flemish, Holland, Belgium, France

(Guy), earl of, X. 14. Moss, in Perthshire, XVII 458 Flandrians, or Flemingians, sect, XIV 501 Flange. See Flanch.

Flanking, in fortification, IX. 801. FLANNAN ISLANDS, IX. 654.

FLANNEL, IX. 654

FLAT, in music, IX. 654, XV. 706, 707 Flat-fish, XII. 225, IX. 648, 764-fossil, XVII 128.

Flaugergues, on the oscillation of waves, XII. 72

FLAVEL (John), IX. 654. Flavian dynasty in Rome, XIX. 339-341.

FLAX, IX. 655; V 187-culture of, II 332; in Antrim, III. 285; France, X. 253, Belgium, IV. 625, Prussia, XVIII. 666—trade in Yorkshire, XIV 288—manufacture in Montrose, XV. 524 -breadth cultivated in Ireland, XII 518-flax-spinning in Fifeshire, IX. 545

—bleaching of, IV. 768—preparation of, for making thread, XIII. 494—dyes worse than wool and silk, VIII. 274 watering of, 278-structure of, ibmg of, ib-in rope-making, XIX. 491—spinning of, XX. 511—quantity imported, VIII. 734 See Hemp, Linen.—cotton, IX. 656.

New Zealand, V. 212, XI. 313;

XVI. 233.

- order of plants, V. 187.

purging, V. 187 FLAXMAN (John), IX. 657—on painting among the Greeks, XVII. 51—his character as a painter, 80; as a sculptor, XIX. 864—on sculpture, 853 et seq.

Flea, IX 260—its agility, XX. 770—modes of killing, XXI. 550—fleas on the domestic animals, 579 FLEAM, IX. 658.

FLECHE (La), French town, IX. 658; XX.

FLÉCHIER (Esprit), IX. 658. FLECKNOR (Richard), IX 659.

### FLE-FLO

FLUECE, IX 659-varieties of wool in a single, XXI 905—yolk of, 1b—colour, 1b—weight, 906—South Down, 1b See Wool.

- ORDER OF THE GOLDEN, IX. 659, XIII 116

FLEET, IX. 659 — ordinary division of, XXI 719—evolution of, 720 et seq See Navy.

- (Loch), bar at, XVI 80. - Prison, IX. 660; XIII. 678. Fleetwood, in Lancashire, IX. 660. - (CHARLES), IX. 660

——— (WILLIAM), IX. 660. Flegræan fields, XX. 236

Fleming (Dr), on the fall of the leaf, V 110—his History of British Animals, XVI 733-on the geology of Perthshire, XVII 458

— (Mr), on pine-apple pits, XI 730 FLEMISH LANGUAGE, IX. 660—bibles, IV 702—agriculture, II 252.

school of painting, IX. 660, III 710; XVII. 74

Flemming, poetry of, XVIII. 118 FLENSBORG, Danish seaport, IX. 660 Fleschier (J), on the rambow, XVI 526 FLESH, IX 660—its structure, II. 821—as manure, 407—its nourishing qualities in different classes of animals, III. 179 See Muscle

FLETA, a treatise on English law, IX. 661 FLETCHER (Andrew), of Saltoun, IX. 661; XI 178—the Darien project encouraged by, VIL 657

- (Dr), on theology, XXL 192 et seq (GILES and PHINEAS), poets, IX.

- (John), IX. 662, IV. 533-dramatic works of, VIII. 159 FLETEWOOD (William), IX. 662 Fleurant (M.), aeronaut, II 177

FLEUR-DE-LIS, in heraldry, IX. 662; XI 326, 335

FLEURY (Andrè Hercule de), cardinal, IX. 662, X 35.

- (CLAUDE), IX. 662. FLEURUS, town in Belgium, IX. 663. FLEXOR MUSCLES, IX. 663, III. 38, 39 Flexure, propositions relating to, VL 251; of beams, L 875

Fleyder on the art of flying, IL 167

Flubustiers, X. 303.
Flight and Robson (Messrs), their Apollonicon, XVI 713

FLINDERS (Mathew), IX 663, X. 295-his discoveries in New Holland, IV 253, 254-on the coral reefs of New Holland. 269.

FLINT, IX. 663, XV. 69, 147. 144—specific gravity of, XII. 88—in chalk, XV. 211—preparation of, for pottery, XVIII 410—employed in building, XX. 712

glass, IX. 663-manufacture of, X. 672; for telescopes, XX. 121.

Welsh town, IX. 663

FLINTSHIRE, IX. 663-lead mines of, XV 246-population and value of property, VIII 754 Flinty slate, XV. 69.

FLIP, a kind of drink, IX. 664 Float, XII 142 Float-ore, XV. 222.

Floating, means of, XIII. 439, 440.

anchor, III. 118

bodies, stability of, XX. 152.

— iron batteries, XX 188.
— lights, XIII. 471, 482

FLODDEN HELD, IX. 664—battle of, VIII.
114, 698; XIX. 766—"The Flowers of the Forest," a song occasioned by, VIII 119-Selkirk men present at, XX. 40. Floe, XVII 584

Flogging, punishment of, XIV. 445-in the navy, XVL 104.

FLOOD, IX. 665. See Deluge.

(Mr), XII. 496, XI. 2—his motion on parliamentary reform, in 1790, V

Floodgates, XIX. 221. FLOOR, IX. 665—construction of, V. 747, 748; XII. 812—measurement of floor-

### FLO-FLU

ing, V. 749-in the houses of Pompeli and Herculaneum, III. 472—modes of rendering them fire-proof, XIII 438, 439, VII. 331

Floors, in ship-building, XX 186, 194. FLORA, IX. 665-circus of, VI 734.

— in botany, IX. 665—of the British Isles, 774—of Orkney, XVI. 719. - planet, IV 91.

FLORALES LUDI, IX. 665. Floral games, academy of, II 61. FLORENCE, IX. 665, XII. 649, et seq,

XXI. 396-academies at, II. 70-Acad della Crusca, VII 536 (see Crusca)
—hbranes, XIII 414—cathedral, III
450—Dolomieu on the figured stones 450—Dolomet on the figured stones of, VIII. 95—glass, IV 456—power of the Medica at, XIV. 447—school of painting, XVIII. 528—railway from, to Leghorn, XXI. 395-university, 492-varnish, VIII 812

- old English gold coin, IX. 666. Florentine academicians, the first to use a dense fluid instead of air in thermometers, L 756

marble, VI 735 FLORES, Island, IX. 666

- one of the Azores, IV. 336. FLORIDA (J Pierre Claris de), IX. 666 FLORIDA, IX. 666; XXL 419—Indians of, II. 680-Florida Indian divers, VIII 57newspapers of, XVI. 195—debt of, XXI 428 early settlers in, 432-purchased from Spain, 440.

Florideæ, seaweeds, reproductive organs of, V 148.

Florido, Italian algebraist, II 484 FLORIN, IX. 668; XV. 441, 442 et seq—in Germany, XV 436

FLORINIANI, Gnostic sect, IX 668 FLORIS (Franz), Flemish painter, IX, 668

Florists' flowers, XI. 750. FLORUS (Lucius Annæus), IX. 668. - (Gessius), XII 772.

Flos ferri, XV 92 Floss silk, XX. 279, 290. Flotation, XII 83.

FLOTSAM, IX. 668 Flounder, family of fishes, XII 271; IX.

Flour, IV 379-constituent parts of wheat flour, 1b —adulteration of, XIV 441. —— (St), French town, IX 669

Flower, IX. 669; V. 117—symmetry and morphology of, 117—odours of, 152—colours of, 151—florists' flowers, XL 750

-preserving of, IX. 669 Flower-garden, XI 745-calendar, 758. Flower-stalk, V. 113—bud, 121. Flowering, periods of, V. 149.

Flowering-rush order of plants, V. 214. Floyd (Dr), on the river Euphrates, IX.

FLUDD (Robert), IX. 669—on animal magnetism, XX. 415.

Fluellite, mineral, XV. 93

Flues of chimneys, V 734-of steam furnaces, XX. 589 et seq.

Fluidity, XI 269—of air, XVIII 28
FLUIDS, IX 669; XII. 77—compressibility of, II 102-of animal bodies, 771, 778 -clarification of, VI. 755—propagation of heat through, 777, XI 261—cohesion of, VII. 56, 464, XII 90—pressure and equilibrium of, 78—experiments with two, 102-motion of, 71, 72, 103periments on the motion of, 111-in-fluence of heat on the motion of, 145resistance of, 159; I 886, XIX. 192 et seq; XX 158-friction of, I. 886oscillation of, XII 162-viscosity of, L 887—weight of, XIV. 417—expansion of, by heat, XI 268—their conversion into vapour, 270, 271-boiling point of, 271-refractive power of, XVI. 558dispersive powers of, 582 — circular polarisation of, 680—colours of dispersed light in, 698-motion of the surface of,

XIV. 386-how obstructed in moving

along canals, XVIII. 62. See Capillary

Action, Hydrodynamics.

#### FLU—FOL

Fluke-worm, XXI 974, 976-in sheep, 570 Fluoboric acid, VII 671 Fluocenne, mineral, XV 93. Fluocerite, mineral, XV 93 Fluorescence, I. 924 Fluoric acid, VI 470. Fluorine, VI 470; XV 64—in plants, V. 97, 98—in sea-water, XIX. 585
Fluor-spar, XV. 98—optical properties of

XVI. 676, 690, 693—in Derbyshire, VII. 755-fluorine from, VL 470-crystallisation of, VIL 561—its phosphorescence, XIII. 457; VIII. 598-in Devonshire, VII. 763.

FLUSHING, town in Holland, IX. 669; XXI 602-taken by the British, V 607. FLUTE, IX. 669, XV 709

in architecture, III 509
Flute-mouths, family of fishes, XII 304 Flute-player, Vaucanson's mechanical, III.

FLUX, IX. 669; IV. 791. FLUXIONS, IX. 670—discovery of, I 635controversy regarding the discovery, ib. 636, XVI. 206. See Calculus, Geo-

metry (New). FLY, IX. 748, 221—turnip-fly, 150—wheatfly, 226—flesh-fly, 247—gad-fly, 245—forest, 256—horse, 231—stinging, 245 natural and artificial, used in angling, III 149, 151, 153—Tsetse fly, in Africa,II. 218 See Diptera.

in mechanics, IX. 748 - shuttle, VIL 441; XX. 509 FLY-CATCHER, bird, IX. 748; XVI. 749. Fly-fishing, III. 133, 153—rules for, 149 Fly-wheels, XIV. 412-in steam-engines, XX. 589 FLYING, IX. 748-artificial, ib , II 166

- Lemur, XIV. 150. FLYING-FISH, IX. 748, XII. 264, 280 - steam-ship, trials of screw-pro-

pellers in, XX 560, Fo, or Foh, XV 761 See Fe FOAL, IX. 748—treatment of foals, IL 339; XI 637

FOCHABERS, in Morayshire, IX. 748
FOCUS, IX. 748, XXI 117—extinction of volcanic foci, 606—of burning-glasses,

Fodéré (M), on the plague, XVII. 750. FGTUS, IX 748—development of nerves in, II. 816—bones of, 828—teeth, 831 dimensions and weight, III. 2bræ, 5-cianial bones, 28; viz frontal, 15, ethmoid, 16; sphenoid, 18; occipital, 19, temporal, 21-lower jaw, 24 -membranes, 72-anatomical peculiarities of, 73-development of, in the dog, XVII. 685

Fog, or Mist, IX. 748; VII. 768, XIV. 654—strongly electric, 661—in Newfoundland, XVI. 171.

Fog-sickness, in cattle, XXI 566. Foggia, city of Naples, IX. 748. Foggo (J), on the electricity of clouds, VIII. 581.

Fogo, island, IX. 748; XXI. 545 Fohi. See Fe. Fohmann on the lymphatics, II. 804. FOHR, or Fora, island. IX. 748. Fort, in fencing, IX 748, 503.

in jewellery, IX. 748.
Foissac (M.), on animal magnetism, XX 427, 429.

Foists, or Foysts, kind of ship, XX. 123. Forx, town of France, IX. 748—province, X. 277.

- (Earl of), VI. 613; X. 315, 30 Fo-kien, or Fu-kiani, in China, IX. 749 Fokschan, or Fokschani, in Turkey, IX 749.

FOLARD (Jean Charles de), IX. 749 FOLCLANDS, or Folklands, IX. 749. FOLCMOTE, or Folkmote, IX. 749. Folds, for sheep, IL 348
FOLDVAR, town in Hungary, IX. 749.
FOLENGO (Theophilus), IX. 749—his Ma-

FOLIGNO, Italian town, IX. 750.

caronics, VIII. 249 FOLIATING of looking-glasses, IX. 750. Foliations, in architecture, III. 509-foliation in rocks, XV. 154, 180.

# FOL-FOO

Folio, IX. 750 Folk's saga of Scandinavia, XIX. 691. Folkes (Martin), IX. 750 FOLKESTONE, or Folkstone, in Kent, IX. 750—harbour at, XIII 66—population, 67—south-castern railway at, 1b

FOLLICLE, in botany, IX. 750; V. 136. - m anatomy, II 833, 834

FOMALHAUT, a stal, IX. 750; IV 79 Fomentation, in veterinary science, XXI 555 and n 2

Fomorians, XII 463. FONDI, town of Naples, IX, 751. lake, XX. 239.

Fonseca, bay of, XV. 663. FONT, IX. 751-or fount of types, 1b, 845 See Fount.

Fontaine (Augustus la), character of his novels, XIX. 290

(JEAN DE LA), IX. 751—his fables, 463—his poetry, XVIII. 116

- (M), his account of the plans of Roman Catholic missionaries with dying children, XV 277

FONTAINEBLEAU, Flench town, IX. 752-

forest of, X. 240—palace of, ornamented by Primaticcio, XVIII. 515 FONTAINES (P. F. Guyot des), French critic, IX. 752.

——turbine wheel, XII 171
FONTANA (Felice), IX. 752—on the poison

of serpents, XIX. 45, 70
——— (GREGORIO), IX. 753 on the mu

croscope, XVI 529. Fontanelle, in anatomy, III 16, 29
FONTARABIA, IX. 754 See Fuenterabia.
FONTENAY, in France, IX. 754

FONTENELLE (Bernard le Bovier de), IX. 754, I. 156—maxim of, 23—compared with La Motte, 23, n 2—works of, 157, 159, n. 2-aspired to be the philosopher of Parisian circles, 159-his character, 160

FONTENOY, IX. 755-battle of, V 460. FONTEVRAULT, order of, IX. 755 FONTINALIA, Roman festival, IX. 755.

Food, IX, 755-chemical composition and physical action of, ib - animal and vegetable substances used as, 758paration of, 765—preservation, 766—of the American aborigines, IL 693—its relation to the teeth of animals, 774young of animals produced when most abundant, III. 182—most needed by the young, 180—instances of abstinence from, II. 51; III 180—its effects on health, XIV. 440-adulteration of, ib.how to ascertain the best kinds of, XVII. 657-mode in which it forms tissues and organs, 1b -digestibility of different kinds of, 660-consumption of, in London, XIII. 664—increased supply necessary in high latitudes, XVIII 167, n. 3—increase of, 343—its influence on life and health, XIX. 610-different classes of, 1b, 611-food museum, XXI. 324 See Aliment, Cookery, Dietetics, Digestion, Fast, &c.

- of animals, II 418, VL 522cumstances which lessen the waste of, II. 420 - nutritive value of different kinds of, 419-of the crustaces, VII. 539-of horses, XI. 670

- of plants, changes which take place in, during their growth, IL 382composition of soils as supplying, V 97 Fools, feast of, IX. 770—"mother of

fools," order of, XIII. 122. Fools'-parsley, plant, V. 115. Foor, human, IX. 770-bones of, III. 36arches of, 37-muscles, 39.

of mammalia, bones of, III 81—foot-rot, XXI 563.

of the horse, XI. 672—its diseases, XXI 560, 561—in mollusks, XV. 326 et seq.

lineal measure, IX 770—its length in different countries, XXI. 804 et seq.—in prosody, IX. 770. Foot-guards, XI 74

Foot-pound, in mechanics, XIV. 404, Foot-prints, in geology, XVII. 129 et seq. Foota-toro, XX, 50, 51.

#### FOO-FOR

FOOTE (Samuel), IX. 770-his comedies, VIII 166

Footings, in laying foundations, XX. 721 Footman, XIII. 525. FORAGE, IX. 771-crops, IL. 322.

Foramen ovale, III. 46, 112.

Foraminifera, polypes, XXI. 1007—fossil, ib.; XVII 93

Formes (Dr), on the mortality of Penwith, XV 617

- (DUNCAN), of Culloden, IX. 771. —— (EDWARD), Prof., IX 772—on marine zones of vegetation, V. 229, 232, XVII 630, 636—his theory of the origin of the British flora, V. 231; and fauna, XV 216-on specific centres of vegetation, V. 223—on the natural history of the Isle of Man, XIV. 242-his opinion as to the age of the igneous rocks near Edinburgh, XV. 190, n—on the Pur-beck beds, 208—on the distribution of fossil fishes, XVII. 640—on the echinodermata, XXI 993, n. 4-on the ophiurıdæ, 995.

- (James David), Principal, his dissertation on mathematical and physical science, I 799-experiments on the conductivity of iron, 952, n 4—on the polarisation of heat, 956, 957, and n 1; XI 267, XIII. 454—on the glaciers of Norway, X. 634, XVI 320-on the ablation of the ice of glaciers, 636—on the veined structure of glacier ice, ib, 639-his viscous theory of glaciers, 638, 639-on dirt-bands in glaciers, 637-on the Quans, as distinguished from the Laplanders, XIII. 237—his visit to an encampment of Laplanders, 243—on the absorption of the sun's heat in passing through the atmosphere, XIV. 637-on the temperature of the soil, 644-on steam, as absorptive of certain rays of the spectrum, 683-on the mountains and table-lands of Norway, XVI. 320on the waterfalls of Norway, 321-on the colours of the atmosphere, 691-of steam, 692-his account of Trondhjem, XXL 355.

(JOHN), divine, IX. 775 - (Sir John), on the round towers of Ireland, VIII 216-on Dublin, 227-on the mineral waters of Leuk, XV. 38on mesmerism, XX. 437-on the deception practised by clairvoyants, 438

(Mr), on the cobra di capello, XIX.

- (Mr), his estimate of the value of the woollen manufactures of the United Kıngdom, XXI 918, 919 (WILLIAM), bishop of Edinburgh,

TX. 776 (Sir William), his Life of Dr Beattie, IV 531.

Forbin (Count), his description of the fire of St Elmo, VIII 588 FORCE, IX. 777; IV. 219; VIII., 321—

application of forces to solids, I 874forces which retain the planets in their orbits, IV. 97—which disturb the elliptic motion of the planets, 102—composition and resolution of forces, VI 254; VIII 331 estimation or reduction of, 340accelerating and letaiding, 347; XIV 403; XIX. 436—inherent, VIII. 330—deflecting, 333, 356; XIV. 408, 408 central, VIII. 358—moving distinguished from accelerating, 356-law of magnetic, XIV. 4, 42-deviating forces, 403procating forces, 408-couples of, 404 forces of disturbance in geology, XV. 166-centrifugal, XIV. 409--vital forces XVII. 656-moment of a force, XIX. 430-forces acting on a ship in motion, XX. 157, 180 — electro-motive force, XXI. 94. See Dynamics, Strength of Materials.

Forcellim (Egidio), his Latin dictionary, XVIL 526 FORCEPS, in surgery, IX. 777. FORCER, in mechanics, IX. 777. FORCHHEIM, in Bavaria, IX. 777. Forcing-garden, XL 719 Forcing-pump, XII. 69, 176.

#### FOR—FOR

FORD (John), dramatist, IX. 777. (Mr), on the libraries of Madrid, XIII 409

FORDINGBRIDGE, in Hampshue, IX. 777. Fords, how rendered impassable in war, IX. 810.

FORDUN (John), IX. 777. FORDYCE (David and James) IX. 778. - (GEORGE), IX. 779.

Fore-arm, muscles of the, III. 38 Fore-lock, IX. 779.

Forecastle of a ship, IX. 779, XX. 125 Foreign policy of the United States, XXI.

FOREIGNER, IX. 779—law regarding convright in, VII. 361—immigration of, XIV 275 See Denizen, Alien. Forejudger, in law, IX. 779.

FORELAND, North and South, IX. 779.

FOREMAST, IX. 779. Forensic medicine, XIV. 425.

Foreskin, III. 70

FOREST, IX. 779, XX 210, n 1—influence of chimate on the distribution of forests. of climate on the distribution of lotests, II. 672—of Bavaria, IV 516, 517—Austria, 318—France, ib , X 240, 249—of Brazil, V 294—of Canada, VI 141—England, VIII. 717—of Hampshire, XI 203-Lancashire, XIII 177-Russian, XIX. 519-Sweden, XX. 861roval forests, in Northamptonshire, XVI. 297-of Vermont, XXI 550-charter of, VI 427, XX. 210—submanne, XV. 216, IX. 794; XVII 641—laws, IX. 780, XX. 209—plants, V. 221. Forest-flies, IX. 258.

Forestalling, in law, IX. 780 — laws against, II 254, 258; VII 375.

Forester (Mr), on the Norwegian church, XVI. 330

FORFAR, or Angusshire, IX. 780—agricultural statistics, XIX. 796, 797, 798 population, 799 - town, IX, 783

FORFEITURE, IX. 784; IV 186; VIII.

FORFICULA, genus of insects, IX. 784, 155. See Earwig

FORGE, IX. 784; XII 563-anchor-smith's,

III. 119—anvil-smith's, 288
FORCERY, IX. 784; XIV. 427—on the bank of England, XV 474.
Forget-me-not, plant, V 116, 124

Forging, in smithery, IX. 785; XIL 558, 563—of anchors. III. 119 Foris, seaport of Naples, IX. 785.

FORISFAMILIATION, IX. 785 FORK, IX. 785-table-fork, 1b -trenching. TT. 274

FORKEL (J Nicholas), musician, IX. 785 FORLI, city of Italy, IX. 785-legation, XVII 243.

FORLORN HOPE, IX. 785 FORM, in physics, IX. 785 — Aristotle's doctrines respecting, III 542-faculty of, XVII. 563.

primitive, in crystallisation, VII. 560—secondary, 552

various meanings of the word, VIII 9. FORMALITIES, in law, IX. 786. FORMALITY, IX. 786 FORMAN (Andrew), archbishop, IX. 786.

Formartin, IL 32 Formations, in geology, XVII 587, XXI. 834. See Epoch, Period. Formedon, in law, IX 786

FORMENTERA, island, IX. 786. FORMLE, city of Latium, IX. 787. Formic acid, III. 265; VI. 510. FORMICA, genus of insects, IX. 787, 194.

See Ant. FORMOSA, Chinese island, IX 787; XIII.

- African river, IV, 653. FORMULA, or Formulary, IX. 787. FORMULARY, IX. 787.

FORNACALIA, Roman festival, IX. 787. FORNAX, a constellation, IX. 787. FORNIX, in anatomy, IX. 787.

Foros, gulf of, IV. 742. Forres, town in Morayshire, IX. 787-Sweno s stone near, XV. 577.

#### FOR-FOT

Forest, his visit to New Guinea, in 1775, IV 262, 263

Forskal (Peter), IX. 788

FORSTER (John Reinhold), naturalist, IX. 788-his works on insects, 6-on aurora australis, IV. 245-on birds of paradise, XVI 765

(Arnold), his work on insects IX. 23.

(B. M.), his electric pile, XXI 619. (JOHN GEORGE ADAM). IX. 789. (Mr), his rebellion, V. 454, 455

Forsyth (Rev Mr), first to use detonating powder for discharging file-arms, XI 98 FORT, IX, 790 See Fortification.

ST DAVID, town in Hindustan, IX.

vitrified, IX. 790 - of Dunagoil, VI. 26—of Dun-1-deer, II. 33—in Inverness-shire, XII 439—Ross-shire, XIX

FORT-AUGUSTUS, Fort-George, and Fort-William, in Inverness-shire, IX 792, XIL 439, 440

Fort-William, at Calcutta, VI. 69.

FORTALICE, IX. 792 FORTAVENTURA, island, IX. 792; VI. 167. FORTESCUE (Sir John), IX. 792 - family of, XL 327, n 1

FORTH, river and firth, IX. 793; XVII 456. 646; XIX. 791; XX. 702—Links of the, VI. 749, XX. 702—phenomenon in the tides of the firth, VL 749-im provements in the navigation of, XVL 75-reasons for the absence of a bar in

lorrification, IX. 797-value of, in war, XXI. 707.

FORTIFIED ISLAND, IX. 837. Fortin's balance, IV. 384.

FORTITUDE, IX. 837. Fortore, river, XX. 238

Fortresses, armament of, IX 822-mode of attacking them with artillery, ib; III 691-as a means of defending England, XXI. 701—their use in war, 707. FORTROSE, IX. 838, XIX. 427. FORTUNA, goddess, IX. 838.

planet, IV. 91.

FORTUNATE INSULE, IX. 838; VL 162.
Fortunato Fidele, his system of legal medicine, XIV. 422—Roman, III. 471;

XIX. 359, 360. Fortune (Mr), on the tea-plant in India, XXI. 81—on the soil of the tea-lands in China, 84-on the colouring of tea,

FORUM, IX. 838-Bacon's "idols" of the, L 572

FOSCARI (Francesco), doge of Venice, IX. 838.

Foscolo (Ugo), IX. 839. Foscolombe (Boyer de), his works on insects, IX. 22.

Foss Dyke canal, XVI. 54 Foss-way, Roman road, IX. 839

Fossamo, city in Predmont, IX. 839. Fossami, IX. 840. Fosse, or Foss, IX. 839, 818, VI. 827.

Fossii, IX. 840; XV. 128—organic remains, XVII. 687—in the Jura Mountains, XX 887—plants, V. 232, XVII. 640—fishes, XII. 332; XVII. 115 et seq, 640—serpents, 640—in Banffshire, IV 413-shells, XV. 403. See Palseontology.

FOSSOMBRONE, Italian town, IX. 840-silk of, XX. 278, 281; XVII. 243.

Fossores, family of insects, IX. 194.

Foster (Captain Henry), on the figure of the earth as determined by the pendulum, IX. 552, 578, 575-on magnet-18m. XIV. 15.

(JOHN), essayist, IX. 840—on Ro-bert Hall as a preacher, XI 194. - (Mr), on the people of Fermanagh,

IX. 516; of Trpperary, XXI. 288. Foster-brother, V. 679. Fothergill's dry collodion process, in

photography, XVIL 550.

### FOT-FOW

FOTHERGILL (Dr John), IX. 841 - (Mr), on the insensibility of insects to pain, III 177.

(Richard), his rope machinery, XIX. 407.

FOTHERINGAY CASTLE, IX. 842.

Foucault (M), his pendulum experiment, I 854, XVII 388-Hansen's theory of, I 827, 855-on the velocity of light in different media, 910; XVL 550.
Forone (Joseph), Duke of Otranto, IX.

842; X. 178 et seq

—— Parisian police under, XVIII. 191. Fougasse, IX. 842.

Fougere (M), his edition of Pascal's Pensées, XVII. 328, 329-on the charge of scepticism brought against Pascal, 330 Foughnes, in France, IX 842

Foula, or Fowla, Island, IX 843; XX. 113.

FOULAHS, IX. 843, II 222; IX. 352; XX. 50. 51

Foulis (Robert and Andrew), printers, IX. 843; X. 653, XV 526; XVIII. 539 —— (Sir David), V. 394.

Foulques, French family, IX. 843. FOUMART, IX. 843; XIV 157

Foundations, in building, V 730-XX. 721-in water, 722, 723.

Founder, V. 756 acute, in horses, XXI 561

FOUNDERY, or Foundry, IX. 843-of small works, to -of statues, the -of cannon, 844, VI 177—of bells, IX. 844—at Cossupore, VII. 424—in Derbyshine, 754 See Cannon, Casting, Furnace, Gun-making, Type-founding, Iron Manufacture, &c.

-Letter, IX. 844 See Type-founding. FOUNDLING HOSPITALS, IX. 844—in London, VIL 863; XIII 678—Dublin, VIL 224—mortality in, XIV. 444. Foundlings in Paris, XV. 618.

FOUNT, or Font, of types, IX. 845; XVIII 539, and n.; XXI 402.

FOUNTAIN, IX. 845-tree, or til-tree, ibburning fountains, X. 409—fountains in Rome, XIX. 368; Pompeli, XVIII. 286,

FOUR BOROUGH'S COURT, IX. 845. FOURCHAMBAULT, in France, IX. 846. FOURCHE (Bayon la) river, IX. 846 Grande and Petite, rivers in Can-

ada, IX, 846. Fourceov (Antony Francis de), IX. 846-

account of his works, 848-his work on insects, 8-on bathing, IV. 501-on voltaic electricity, XXL 626.

Fourdrinier's paper-making machine, XVII. 258—his paper-cutting machine,

FOURIER (Charles), sociologist, IX. 849— his system of communism, VII. 209 his cosmical views, 210

(Joseph), 946-his early history, ib. 947-his analytic form of the problem of the conduction of heat, 947injury done to him by the jealousy of the mathematicians of the Institute, ib -his physical precision, ib.-his compound circuits, XXI. 651—assumptions of his analytical theory, I. 947—necessity of the law of emanation, ib-his definition of conducting power, 948, and of "enterior conductivity," 1b — his Thèone Analytique, ib .- instances of problems solved by him, ib.-application of his principles to the thermal condition of the earth, 949—on the proper heat of the globe, 1b.—on the temperature of space, 950, 951-his writings on pure mathematics, 951-his experiments and style, ib -death, ib.

FOURMONT (Etienne), IX. 849. Fournel (M.), his work on magnetic som-nambulism, XX. 424

FOURNESS, or Furness, in Lancashire, IX. 849; XIII. 177.

Fourneyron's water-wheel, XIL 75, 169,

FOU-TCHOW-FOU, IX. 849. Fowey, in Cornwall, IX, 849.

# FOW-FRA

Fowl, domestic, as food, IX. 762—Egyptian mode of hatching, XVIII 815 Fowler's steam draining apparatus, VIII.

- (Mr), on heating hot-houses, XL

- (William), VIII 190, n. 1.

Fowlerte, mineral, XV 82
Fowling-piece, XX. 213—charging the, 214

Fox, IX 849; XII. 43; XIV. 164; XXI 548-varieties of, and value of their skins. X. 349-fox-hunting, XII 35 et seq

(CHARLES JAMES), IX. 849—on the balance of power, IV. 392, V 526 the coalition joined by, 506-on the establishment of the Prince of Wales. 507-his India bills, 508, 528, XI 496 -parhamentary conduct, V 509 et seq. -run of his political fortunes, 513elected member for Westminster, 514on the Germanic league, 517-on the sinking fund, 518-on the commercial treaty with France, 521, 529-his denial of the Prince of Wales' connection with Mrs Fitzherbert, 523—on the right of the Prince of Wales to assume the regency, 531 - on the slave-trade, 533, 540—on increasing the army, 535—on the Corporation and Test Acts, 536, 534 -his quarrel with Burke, 537-on the relief of the Catholics, 538-on parliamentary reform, 543, 549-on the king's speech, in 1792, 545—on treating with the French Republic, 546—on the French war, 548, 552, 556, 578-on the expediency of peace with Fiance, in 1800, 570-on the conduct of the war. &c., 578-on the piece of Amiens, 587 part taken by, in the trial of Warren Hastings, 520, 523, 534 — Canning's Hastings, 520, 523, 534 — Canning's attack on, VI 173—on the conduct of Prussia in annexing Hanover to her territory, X. 141-his speeches, XVII 

XVIII 714 et seg.

(JOHN), martyrologist, IX 859 · (Were), on electrical currents, XV 193

Fox's dipping-needle deflector, XIV. 87 Fox-glove, plant, IX. 859 V. 202. Sce Digitalis.

FOX-HOUND, IX. 859, XI. 764 Fox-islands, II 465 Fox-tail grass, V 215.

- wedging, VI 263 Foxdale, mines of, XIV 244

Foxe (Captain Luke), his voyages, XVIII

Foy (General), X. 191, 192-on the mile tary character of the French and British, III. 642, 667—on the British mode of attacking fortresses in Spain, IX. 825.

FOYERS, fall of, IX. 859; XII. 438. FOYLE, in Ireland, IX. 859; XII. 505; VIII 104; XXI 407, 408—its salmonfisheries, IX. 623, 625.

loch, XIII. 680, 681, VIII 104—a base in the trigonometrical survey, XXL 332, 334

Fracastorio (Hieronymus), IX. 859-his poem "De Morbo Gallico," XX. 817, 2 3.

FRACTION, IX. 860-algebraic, II. 492continued, 537-vulgar fractions, III. 597-decimal, 599, 602; VII. 691; I. 551-vanishing, IX. 696

FRACTURE, IX. 860-in minerals, XV. 55 -surgical treatment of fractures, XX. 826—in veterinary science, XXI 557. FRAISE, in fortification, IX. 860, 799.

FRAME, IX. 860—roving—fly—tube—spinning, VII. 444.

Frame-breaking, acts against, V. 612. Framing, in joinery, V. 751; XII. 810. FRANLINGHAM, town in Suffolk, IX 860; XX. 791.

FRANC, French coin, IX. 860; X. 284, XV. 441, 443. - Consol's pumping engines, XX. 612 | FRANCAVILLA, town of Naples, IX. 860.

### FRA-FRA

FRANCE, X. 1; IX. 399; VI 681 et seq — statistics in 1855, X. 240—its progress in philosophy during the seventeenth century, I. 49-Addison's censure of the French writers of his day, 55-sterility of invention in French metaphysicians between Descartes and Condillac, 172, n 3-disposition of the philosophers of the eighteenth century to push then theories to extremes, 180—prevalence of Atheism in Paris, 181—literature of the eighteenth century divided into two epochs, 277-writers on mental philosophy, 184-French and German schools of philosophy contrasted, 186, 187-unrivalled skill of the French in experimental physics, 957—achromatic telescopes, II 94—law of bankruptcy, IV 418-academies, II 64, 67, 69, 71-agriculture, 253; IV 313, VII 432, 433—wars with the Algerines, II 569 et seq -Algiers taken, 573-manufacture of alum in, 641-West Indian colonies, 708-manufacture of sal-ammoniac in, 721, 722-collections of bon-mots or ana, 738—cultivation of anatomy, 757, 763—aqueducts, III. 336—pointed architecture, 448-influence of the Italian school upon architecture, 453-army, 638-artillery, 686, 687-painters, 712voyages of discovery to Australasia, IV 253-war with Austria, 304-comparative culture of Britain, Austria, and, 313—policy of Austria towards, -baking of bread, 380-beards and whiskers, 528, 529 - management of bees, 587-Belgium under the rule of, 598—bibles, 701—mode of teaching the blind, 776—bleaching, 759—wars with Britain, V. 445, 447, 451, 459, 462, 483 —conquest of Minorca, 463; and of Hanover, 464—league with America against Britain in 1778, 483—commercial treaty with Britain in 1786, 521; VII 190, 195, 455—Revolution, V. 535, 539, 463; VII. 649—revolutionary war with Britain, V 546 et seq—peace of Amiens, 585-87—expedition to St Domingo in 1801, 591, XI 256-war with Britain renewed in 1802, V 594-Peninsular war, 603 et seg -peace of 1814. 614—Napoleon's return from Elba, 618 -battle of Waterloo 619 (see Waterloo)-policy of British participation in the revolutionary war considered, 620 -revolution of 1830, 658-trade with Chile, VI. 551-influence of the French civil wars on chivalry, 624-morality of the court in the sixteenth century, 625 —church of, 718—colonies, VII 149; II 708—coal in, VII 126-27, XXI. 60 —mercantile policy, VII. 198, 195—iron manufactures, 195—short credits, 198, 199—influence of socialist opinions in, 214-construction of floors, 331law of copyright in, 359-corn trade, 403-condition of the agriculturists, 432 -effects of the minute division of land. ib -cotton-manufacture, 459-condition at the period of the Crusades, 528-persecution of the Protestants, VIII 125—the drama, 143, 144, 146, 149, 167—duelling, 230—tatle of Duke, 234—dyeing, 274—the Economists, 374—invasion of Egypt, 488; V. 564, XV. 791—invaded by Edward III., VIII. 683, and by Henry V. 688—trade with England, -restrictions on British trade with, IX. 436-fairs in, 468-mountains, 383 -fan-making, 481-feudal law, 524siege of Antwerp in 1832, 826-glassmaking, X. 659—tables of ranges for cannon, XI. 149—hats, 242—contests with the English in Hindustan, 482, 483-historical writers, 548-invasions of Holland, 577, 579, 580—Holland in-corporated with, 579—interest of money, XII. 429, 431-insurance offices in, 418 —invasions of Ireland, 494, 498, 499— Jews in, 779, 782, 783—iron ores of, 541—iron bridges in, 581 et seq.—Jesuitism, 755-joinery, 805-expedition to Italy in 1849, 659 - Italy under,

### FRA-FRA

653-orders of knighthood, XIII 120manufacture of lace, 142—language, 213—Code Napoleon, 272, XV. 793—law of libel, XIII 356—libiaries, 406—lighthouses, 464, 476—medical jurisprudence, XIV 423, 424-lead mines of, XV 242-value of the produce of its mines, 248—eocene rocks, 213—miocene, 214 — monarchy, 413 — seignorage on coined money, 425-money, 434, 436, XVI. 387-silver as a standard, XV. 429-Bank of, 489, 490-education in, 818—law regulating education, 819 first use of gas-lights in, X. 410-crown of, XL 335-newspapers of, XVI. 195, published during the revolution, 198press law of 1852, 200-expedition to Rome in 1849, XIL 659-leprosy in, XIII 340, 341-lotteries, 697-propor tion of insane in, XIV 536-school of painting, XVII 75—paper-making, 261—progress of philology in, 523—heights of the principal mountains in, 642, 643 — limited liability in, 318 — poetry, XVIII 115—police of, 184—political economists, 220, 231—invasion of Portugal, 387—post-office, 420, 424—ocean mails, 427—pottery and porcelain fac-tories, 432, 433, 437, 438—precious metals employed in currency, 465—currency chiefly in gold, 473—Presbyterianism m, 487—registration in, 841—railway statistics, 787—the Reformation, 827 roads, XIX. 229-romance, 266, 286wars with Russia, 492 et seq-school of sculpture in, 865—attention to sanitary measures in, 603—war with Austria in 1859, 643 — savings-banks, 672 — navy, XX. 181, 136, 138—dominion in Naples, 261, 264-production and manufacture of silk in, 278-mesmerism and somnambulism in, 418, 422-war with Sweden, 859-invasion of Switzerland, 886 -surgery in, 816 et seq -masonry, 711 -beet-root sugar, 798—suicides in, 800 -co-operation with Britain in abolishing slavery, 323-war with Spain in 1823, 476-effects of the reduction of the duties on fish, sugar, and salt, XXI 72-old system of taxation in, 41-consumption of tea in, 91-wars with United States, 434, 438 - colonies in United States, 432 — universities, 444, 491 weights and measures, 805, 810-wines and wine-making, 882, 890, 891-woollen and worsted manufactures of, 920textile industry in, 780, 793—factory legislation of, 791—maps of, X. Plates. See French

FRANCE, Isle of, X 285; XIV. 362.

FRANCHISE, X. 285, 277
FRANCHISE, X. 285, 738—in England,
XVII 293—Scotland, 294—Ireland, ib
Roman, XIX. 307.

Francia (Dr), dictator of Paraguay, XVII. 269

Francillon (John), his work on insects, IX. 8.

Francis I, king of France, VI 615-reign of, X. 30 — duelling encouraged by, VIII. 230—his wars in Italy, XII 652— Paris improved by, XVII. 278—police measures of, XVIII 184

- IL, king of France, X. 32. - II., king of the Two Sicilies, XX. 263, 264.

II., emperor of Austria, IV. 304 - Joseph, emperor of Austria, IV. 308 : XIX. 644

(PHILIP), poet, X. 285. (Sir Philip), X. 285; V. 513, 520.

(St), XV 408; X. 286

Franciscan library at Rome, XIII. 412. Franciscans, X. 286, 299; XIV. 497—in Jerusalem, XII. 747.

Francisco (San), VI. 96--county of, 100river, XVII 603, 646.

Franck, his work on msects, IX. 17. Franco (Matteo), VIII. 250.

Francolins, birds, XVI 791. FRANCONIA, X. 286; IV. 516, 517—chief towns in, 518—invaded by Gustavus Adolphus, XX. 850.

#### FRA—FRA

FRANEKER, town in Holland, X. 286 FRINK, X. 287-laws of the Franks, VI 220-wars of the Romans with, VII 206 -Dubos on their entry into Gaul, VIII 227 — language X. 287 — their conquest of Gaul, 2; of Helvetia, XX, 883 - (Dr James), on the plague, XVII 750

- (Dr Lewis), on the plague, XVII 748 et seq

FRANK-ALMOIGNE, X. 287-pledge, 1b FRANKENBERG, town in Saxony, X. 287 Frankenhausen, town in Germany, X.

Frankenheim (Dr), on capillary attraction XII 102

Frankeniaceæ, nat order of plants, V 183 FRANKENSTEIN, in Silesia, X. 287 FRANKENTHAL, in Bavaria, X. 287.

FRANKFORT-ON-THE-MAINE, X. 287, 694 fairs, IX. 468-coins, XV 441-meeting of the vor-parliament at, X. 581-Jews in, XII. 783-weights and measures, XXI 811.

ON-THE-ODER, X. 288-fall of rain at, XVIII 662

- in Kentucky, X. 289; XIII 70. FRANKINCENSE, X 289, XII 366

Franking of letters, act for regulating, V 468; XVIII 405—abolished, 411, XXI -in France, XVIII. 423 Frankish dialects, X. 587

Frankland's Islands, X. 289.

FRANKLIN (Benjamin), X. 289-his theory of electrical phenomena, I. 734-his talents and acquirements, ib -his floating anchor, III 118—his controversy with Nollet, V. 368—his friendship with J. Canton, VI. 201—his British ancestors, XVI 298—his discoveries in electricity, I 734; VIII. 527—proved the electrical character of lightning, I 735; VIII 582—on the magnetic effects of electricity, 600-his electrical kite, 608, XIV 660-his theory of the Leyden jar, VIII 612—on musical glasses, XI 230-his magic square and cucle, XIII 811-on population, XV. 601-ambassador to France, X. 38-his epigram on himself, IX 283—appointed postmaster-general, XVIII. 408—on the art of swimming, XX. 879-anecdote of Whitefield and, XXI 855-English ancestors of. 740.

- Fort, temperature at, VI 770 Institute, their experiments on the elastic force of steam, XX. 558-formula representing the relation of the pressure and temperature of steam,

—— (James), newspaper published by, XVI. 193; X. 289, and n. 3

- (Sir John), X. 294-on aurora borealis, IV. 247, 249-on the temperature of the arctic regions, VI. 770—his arctic expeditions, X. 473, 474; XVIII 171, 172—expeditions sent in search of, 172 discovery of the fate of, X 298; XVIII. 175—last despatch received from, XIV. 490-governor of Tasmania, XXI.

(Lady), searching expeditions promoted by, XVIII 173, 175. - (THOMAS), X. 299

Franklinite, mineral, XV. 108. Franscini (M), on the statistics of Switzerland, XX. 888.

Franzén (F. Michael), Swedish poet, XIX. 699.

FRASCATI, Italian town, X. 299. Fraser, on Arabia, III. 342, n .- on Persia, XVII. 419 et seq -on the Himalayas,

XI. 447, 448, 452. Fraserburge, X. 299: II. 34. Fratercula, genus of birds, XVI. 810. Fraternal duty, XV 569 FRATRICELLI, X. 299.

FRAUENBURG, in Prussia, X 300. FRAUNHOFER (Joseph von), X 300; I 915-his discovery of the lines of the spectrum, 915, 751; XVL 558-achromatic glasses improved by, I. 751, 915—superiority of the flint-glass produced

#### FRA—FRE

under his inspection, 752 and  $\pi$  - on electrical light, VIII. 546-Dorpat telescope made by, IV 150-on the spectrum, XIII. 452-his micrometers, XIV 758, 789-his microscopes, 777-his optical discoveries, L. 752; XVI, 544, 580. 609, 610 et seq.-on the illuminating power of the spectrum, XVI 590

Frannhofer and Utzchneider (Messrs), their manufacture of telescopes, XXI.

FRAUSTADT, town in Posen, X. 300 FREA, or Frigga, wife of Odin, X. 300, 312
—Friday named from, 309. Fredegonde, X. 4.

Frederic, elector-palatine, V. 386 FREDERICIA, town in Denmark, X. 300 FREDERICK, X. 300.

—— Barbarossa, XVII 197—his opera-tions in Italy, XII 646—engaged in the Crusades, VII. 525

- L, king of Prussia, XVIII. 650. - IL, the Great, X. 300—reign of, XVIII 651-his army, III. 637-his improvements in artillery, 684-his contempt for the doctrones of the gospel. XII. 762 and n 3—his monument at Berlin, IV 679—his opposition to the plan of Joseph II. for the acquisition of Bavaria, V 516-Rauch's monument to, XVIII. 811-Voltaire's intercourse with, XXI 658, 659-his military tactics, XX. 705, 707, 711 et seq.

- II, emperor of Germany, XX. 257, 263-sciences encouraged by, IIL 796his invasion of Palestine, XVII 197his patronage of the university of Bologna, XXI 449

- IV, of Denmark, VII. 741. - V., of Denmark, VIL 742

- VII, of Denmark, VIL 743, 744. Prince of Wales, his death in the year 1751, V 462.

 Prince of Almatura, XX. 263. I, elector of Brandenburg, XVIII 647

- II , elector of Brandenburg, XVIII 647.

Frederick-William, the Great Elector, XVIIL 649-army improved by, III

- L, IL, III, IV, kings of Prussia, XVIII. 650, 655, 658 ——town in Maryland, X. 302.

FREDERICKSBORG, in Zealand, X., 302. FREDERICKSBURGH, X 303

FREDERICKSHALD, or Frederickshall, X. 303 siege of, XX. 856-assistance given by Swedenborg at, 867.

Fredericksvoern, in Norway, XIIL 250 FREDERICKTON, X. 303; XVI. 163, 164. Fredro (Maximilian), X. 303. FREE BENCH, X. 303.

- CHURCH, X. 303; V. 669; XVIII 494—in Edinburgh, VIII 398—college, 400—schools, XV 825; XIX 802—sum expended on missions, XV 272—settlement at Otago, XVI. 235-union of the Associate Union of Original Seceders with, XVIII 502-proportion of adherents to, XIX 801-in Sutherland, XX. 843. See Disruption of the Established Church.

- IMPERIAL CITTES, X. 303. Town, Sierra-Leone, XX, 271.

trade, VIII. 374-advantages of, VII. 195, 455, XVIII 230-its effect on our diplomacy, VIII 40-customs-duties not inconsistent with, XXI. 62—duties on tea under, 90.

-will, XVII. 369—Erasmus on, XIII 734. See Liberty, Necessity. Freebooters, X. 303; V. 707. Freedman, X. 303.

FREEHOLD, X. 303-effects of dividing land into small freeholds, VIL 432.

FREEMASONRY, X. 308; XIV. 336-Dionysiacs of Ionia, III. 401. Freemen, mode of making, at Alnwick, II. 603.

FREESTONE, X. 303-strength of, XX. 758, 759. See Sandstone. Free-thinkers, VIL 701.

#### FRE-FRE

FREEWILL ISLANDS, X. 303.

Freezing, X. 303; VII. 101, 103, 106— Leslie's experiments on, I 945—effect of, on building stone, XX. 712-freezing point, XXI. 222

Fregier (M.), his work on the police of Paris, XVIII. 185, n 9.

Fregilus, genus of birds, XVI 754, 771. Freiberg, in Saxony, X. 303—silver mines of, XV 235-Wernerian School at, XXI

FREIBURG, in Baden, X. 304.

or Freyburg, or Friburg, in Switzerland, X 304; XX. 882—university of. XXI 492.

Freieslebenite, mineral, XV. 120. FREIGHT, X. 305; VI 428 FREIND (John), X. 305; XIV. 462 FREINSHEIM (Johann), X. 305. Freire (General), VI 553. FREISING, in Bavaria, X. 305. FREJUS, French town, X. 305

French, their skulls, III. 29-their military character, 642—intellectual character, IV 211, 212—contrasted with the Germans, VIII 167-historical writers, XL 548 - fur settlements, X. 346-their gallantry, XX 79, n-rise of their naval power, 131—their ships, ib , 133—cultivation of seamanship, 2—their improvements in sugar-making, 793 -French Canadians, VL 144. France

- Academies, provincial academies, IL -Academy of Painting and Sculpture, 67-Royal Academy of Music, 68-aca demies of architecture, medals, and inscriptions, 69-French Academy, 71

Academy of Sciences, IL 63 -expedition sent by, to determine the figure of the earth, IX 548, 549; L 772, 773; V 243, VIL 229-experiments on the force of steam, XX. 558-formula representing the result of these experiments, 565.

beans, IV 526, IX. 760; XL 738. bernes, dyestuff, VIII 294.

colonies of the United States, XXI. 432—wars in, 434.

— Institute, XII 392. See Institute

of France.

language, XIII 213—used in diplomacy, VIII 41—Norman, 793—Bibles, IV. 701

Frenicle on magic squares, XIII. 810 FRERE (John Hookham), X 306. Frere's system for the blind, IV. 782, XVIII 554.

FRESCOBALDI (Girolamo), X. 306. FRESCO-PAINTING, X. 306; XVII. 52, 60. FRESHES, X. 306-effects of, XIX. 206,

Fresh-water serpents, XIX. 58. Freshwater, Isle of Wight, XXL 862.

FRESNEL (Augustin-Jean), X. 306, L 903 his explanation of the exterior fringes of shadows, 899; VI. 651-on the diffraction of light, I. 903; improves on Young's theory, ib —on transverse vibra-tions, 904; applied to the theory of light, ib —on the laws of reflection and refraction, ib -his Rhomb, 905-his explanation of the theory of double refraction, ib -on the theory of crystals with two axes, ib -reception given to his theory of double refraction, 906chromatics, VI. 643 et seq—his system of lighthouse illumination, I 906; XIII. 471-on lenses, 472-his mechanical lamp, 473-on magnetism, XIV. 42his optical discoveries, XVI. 543, 544. 545, 598, 607, 631 et seg; I. 908, 909—death and character, 907.

- (Leonor), L. 907; XIII. 471, 479; X. 308

FRESNOY (Charles Alphonse du), X. 308. FRET, or Fretle, architectural ornament, X. 308.

- and Fretty, in heraldry, XI. 330. Fréteau (M), X. 43.

FREUDENSTADT, X. 308. FREUDENTHAL, X. 308.

FREY (Joschim), X. 308; VIII. 807, 808

#### FRE-FRO

Freyberg See Freiberg
Freycinet (M), on the variation of the needle, XIV. 54—his pendulum observations, IX. 578, 574.

Freyer (C. F), his works on insects, IX. 21, 24

Freytag, his novels, XIX. 293 FRIAR, X. 308-observant, 1b-preaching, VIII. 99.

Fricento, town of Naples, X. 312

FRICTION, X 309, XIV 405-Coulomb on, VII. 462, 464; I 873 - of fluids, 886 -index of, 887-heat from, XI. 275; XIV. 408-combustion from, 427-effect of, in substances employed in architecture, V. 354-electricity produced by, VIII 535-effects in diminishing the velocity of water, XII 71-stability of friction, XIV 381, 382-work of, 405moment of, 406—of pivots and collars, ib.—of teeth, 407—of cords and belts, ib.—friction-couplings, 408—unguents to counteract, 405, 408—of railway trains, I 884, 885-friction-brakes, XX. 601.

Friction-match, XIV 352 FRIDAY, X. 309-origin of the name, 300; L 458, n.; VL 75

Fridericia, town in Jutland, X. 300 FRIEDLAND, X. 309 - battle of, 146, XIX.

FRIDSTOL, X. 309.

FRIENDS, Society of, X. 311. of the People, societies of, in 1792, V. 542, 545, VIII 393
Friendship, Aristotle on, III. 563—among

the Cretans, VII 495

Frienshemus's account of the serpent that attacked Regulus, XIX. 63.

Fries (B. F), his work on insects, IX. 15.

FRIESLAND, X. 311—east, 312, IV. 242—

language, XIII 211. FRIEZE, in architecture, X. 312; III. 509-

Dorie, 464, 476-Ionic, 465, 475-Corinthian, 467, 474-enrichments of Roman, - coarse woollen cloth, X. 312.

FRIGA, wife of Odin, X. 312, 300
FRIGATE, X. 312; XVI. 96; XX. 135the first built, 128-steam-frigates, 138, 640

Frigate-bird, XVL 814. FRIGATOON, X. 312.

FRIGENTO, town of Naples, X. 312; IL 732.

Frigid zones, X. 488

Frigorific saline powders, VII. 102, 104. See Congelation.

FRILAZIN, X. 312.

Fringe-myrtle, order of plants, V. 192. Fringes, in optics, XVI. 605, 621; XIV. 679; I 899.

Fringilla, genus of birds, XVI 760.

Frisch (J. Leonard), his work on insects,
IX. 4—on birds, XVI 726.

Frische-haff, X. 812; XVIII. 662. Frist (Paul), X. 312

Frisian language, X. 588. FRISH, X. 314, 312, 572

Frisius (Gemma), XVI 3, XIII 686. FRIT, OF FRITT, X. 314. Frith (John), VII. 482. Fritillary, V. 212.

Fritzsch on the opening and closing of flowers, V. 150, 151. Frobenius (Joannes), X. 314.

FROBISHER (Sir Martin), navigator, X. 314

-his north-west voyages of discovery, 478, 624; XVIII. 166 - STRAIT, X. 315; XI. 39; XVIII. 166 and n. 2.

FRODSHAM, town in Cheshire, X. 315. Frog-bit order of plants, V. 210. Frogs, XIX. 75—fossil, XVII. 153-

laries in the foot of, IL 797; XVII. 692 -bones of, III. 86 et seq.-proper electricity of, I. 980—effect of light on the spawn of, XIII 460—matlametic frog, XVII. 684—as food, XIX. 76.

in Farnery, X. 317.

Frog-spittle, IX. 170. See Froth-spit.

# FRO-FUE

FROISSART (Jean), X. 315 - his "Chronicles," VI 615 et seq.-his account of Gaston, earl of Foix, 613—an enthu-siastic describer of the combats of knights, 617 - instances of chivalry quoted from, 618, 619, 621-on hats XI. 240

Frolich (F), his work on insects, TX, 16 FROME, river and town, X. 315; VIII 111

Froment (M), his microscopic writing, XIV 802.

Froment's electro-sorting machine, XXI

FROMISTA, Spanish town, X 315 Frond, V 76—of ferns, 143. FRONTAL, X. 316.

- bone, in man, III 15-suture of the, 27-in the mammalia, 77-in birds, 85

sinus, III 30-varying size of, XVII 567 and n

FRONTINUS (Sextus Julius), X. 316the Roman aqueducts, III. 333—on hydraulics, XII 69

FRONTISPIECE, in architecture, X. 316;

FRONTO (Marcus Cornelius), X 316—discovery of his works by Mai, XVII 212
FROSINONE, Italian town, X 316—delegation of, XVII 243

Frost, X. 316—depth to which it pene-trates into the earth, VI. 768; in the polar regions, XVIII. 178—why a scarcity of water from springs is occasioned by, 72 See Congelation, Freezing
HOAR, X. 316; VII 765, 769

XIV. 653

- (John), V. 667, XVI 178 - (M1), his endcavours to make artificial cement, XX. 714

FROTH-SPIT, or cuckoo spit, X. 316; IX.

Froude (M1), on English history, XI 539 FROWDE (Philip), poet, X. 316
FROZEN OCEAN, X. 316. See Polar Sea.

Fructiferi, academy of, II 70. Frugardite, mineral, XV. 85.

Fruit, in botany, V. 134, 191—physiology of, 160—transformations in, 139—fruits as articles of food, IX 759-preservation of, 767-culture of hardy fruits, XI 707; of small fruits, 717. See the different countries, under vegetable productions

garden, XI. 702 — calendar, 758 et seg

FRUIT-TREES, X. 316—their propagation by seeds, XL 702; by cuttings, 703; layers, ib; grafting, ib, 704; budding, 1b—planting of, 1b—training of, 705, 706—protection of the blossom, 707.

Fruiting-house, for pine-apples, XI. 733. FRUMENTACEOUS, X. 316.

FRUMENTARII, Roman soldiers, X. 316. FRUMENTATIO, X. 317 Frumentius, Christianity introduced into

Abyssinia by, II. 57. FRUSE, or Frog, in farriery, X. 317.

FRUSTUM, in geometry, X. 317. FRUTEX, a shrub, X. 317. Fry (Dr), his alphabet for the blind,

XVIII 554
— (Mrs). See Gurney, Elizabeth.
Frying, IX 766.

Fryxell (Anders), XIX. 700. FUCA (Juan de), strait, X. 317.

Fucaceæ, sub-order of algæ, V. 217, 148. Fuchia, flowering shrub, X 317; V. 192; XI. 748—in Terra del Fuego, XVII.

629. Fuci, sea-weeds or algae, X. 317; V. 217, 229; XVII 629.

FUCINUS LACUS, X. 317; XIL 638; XX.

Fucola, genus of mollusks, XV. 369. Fucus, ancient dye, X. 317.

Fuegians, II. 677. FUEL, X. 817; XIV. 444—for furnaces, X. 360—composition of, XX. 352—dung of cattle used for, in Egypt, II. 721for fusing iron-ores, XII. 542—of light-houses, XIII. 480—economy of, in

# FUE-FUN

steam-vessels, XX. 647, 648-patent for steam-boilers, 653. See Coal, Coke, &c. FUENCALIENTE, Spanish town, X 322 FUENCARRAL, Spanish town, X 322 FUENLABRADA, in Spain, X. 322 FUENMAYOR, Spanish city, X 322 FUENSALIDA, Spanish town, X 322. FUENSANTA, Spanish town, X. 322 FUENTE-ALAMO, Spanish town, X. 322 FUENTE-CANTOS, Spanish city, X. 322. FUENTE-DE-LEON, Spanish town, X 322 FUENTE-DEL-MAESTRE, Spanish town, X

FUENTE-DEL-SAUCO, Spanish town, X 322 FUENTE-EL-FRESNO, Spanish town, X. 322 FUENTE-LA-HIGUERA, Spanish city, X. 322. FUENTE-OBEJUNA, Spanish town, X 323. FUENTEPELAYO, Spanish town, X 323. FUENTERABIA, Spanish city, X 323 FUENTES-DE-DON-BERMUDO, Spanish town, X. 323

FUENTES-DE-EBRO, Spanish town, X. 323 FUENTES-DE-LA-CAMPANA, Spanish town, X. 323

FUENTES-DE-LEON, Spanish town, X 323 FUENTES-DE-ONORA, Spanish town, X. 323 -battles of, V. 608; XXI 824.

FUEROS, X. 323. Fuerteventura, Island, VI. 167. Fuessh (J. C), his works on insects, IX

FUGALIA, X. 324; XVIII. 831. FUGLEMAN, X. 324.

Fugue, in music, X. 324; XV. 735. Fuhchau, Chinese town, opened to British commerce in 1842, VI 597-exports and imports, 591

Fulahs, IX 352. See Foulahs. Fulcrum, in mechanics, X. 324, XX 541 Fulca, X. 324, XI 362

Fulgora, genus of msects, IX. 168; XIII

FULHAM, in Middlesex, X 324—Fulham ware, XVIII. 433—the Refuge, female prison at, 585.

Fulhame (Mrs), her method of ornament-ing stuffs with gold figures, XIII. 459. Fulica, genus of birds, XVI 807. Fuligula, genus of birds, XVI. 812. Fulke of Anjou, XIII 113. Fuller (Rev. Andrew), X 324—on the

Antinomian doctune regarding motal distinctions, XV. 543, n. 4

(Thomas), English divine, X. 325

on the Church of England and Puritanism, XVIII 488-his notice of the ship Sovereign, XX. 128-on the qualitaes of the ships of different nations, 129—of his description of Surrey, 836

FULLER'S RARTH, X. 327; XV 83.

— teazel, V. 196; XXI. 922.

FULLING, X. 327—of wool, VIII. 275 cloth, XXI. 921. Fulmar, bird, XVI 812.

Fulminary tubes, or Fulgurites, VIII. 585; XIV. 662

FULMINATING compounds, or fulminates, X. 327; VI. 474—chloruret of azote, I. 952.

FULMINATION, X. 327. Fulminic acid, VI 474. FULNEK, X. 328.

FULTA, in Hindustan, X 327.

Fulron (Robert), X. 327—his steamboats, I. 869, XX. 638 Fulvius, siege of Ambracia by, II. 661.

Fumaria officinalis, plant, V. 114 Fumariaceæ, nat. order of plants, V. 182 FUMIGATION, X 328

Fumitory order of plants, V. 182.

Funambulus, X. 328. Funchal, X. 328; XIII. 796, 798—dew point at, IV. 184

Function, X. 328-animal functions, II 774—discontinuous functions, in analysis, L. 807 - Fourier on, 951 - in fluxions, IX. 679; values of, 697.

Fund, X. 328—sinking-fund, VIII. 752. See that article. FUNDAMENTAL BASS, X. 328. See Music

Fundi, town in Latium, X. 328; IX. 751. FUNDING SYSTEM, X. 328-difficulties in 1799, V. 559, 562-national debt of the

# FUN—FUS

United Kingdom, VIII. 752-article en, in this work, by Ricardo, XIX. 155 See Debt, National

Fundulus, genus of fishes, XII 252 FUNDY, Bay of, X. 343; XVI 343—tide m, XVII 581.

Funen, island, X 343; VII. 746

FUNERAL RITES, X. 343—of the North American Indians, II. 681—of the ancients, V 774, 795—coronach, VII 412—funeral games, X 844—oration, 345—in Egypt, VIII 443, 449—escut-cheons, XI 340 See Burial, Tomb - 11tual, or Egyptian book of the

dead, VIII. 441,  $\overline{X}\overline{Y}$ III. 263 FUNDERICHEN, Hungarian city, X. 345 Fungi, nat order of plants, X. 345, V. 217—reproductive organs of, 146 spawn of, 85-a frequent cause of disease in plants, 171, 172—poisonous species, XIV 439, XVIII 131—their connection with dry 10t, VIII 208

FUNGIBLES, in Scots Law, X 345. Fungicolæ, family of insects, IX. 151 Fungidæ, polypes, XXL 1005 Fungus See Fungi

FUNICULAR, or rope machine, X 315.

Funiculi, in botany, V 130, 137. Funnels, filtering, IX. 582 Funza, river, IV. 808.

FUR-TRADE, X. 345 — Russian, II. 465; XIX 551—Canadian, VI 142—Hudson's Bay Company, XI 791—imports of fury into the United Kingdom, VIII. 735; X 347.

Furca, in antiquity, X. 352. Furcaté, in heraldry, X. 352. Furcocerca, genus of animalcules, III. 204.

Furcula, a bone in birds, III 86.

FUREEDPORE, town of Hindustan, X 352. Funerière (Antoine) X. 352-his tabletalk, II. 738

Furia infernalis, XVI. 324. Furies, X. 352; IX. 374. FURLONG, X. 353 Furlough, X. 353.

FURNACE, X. 353-for assaying, III 768, 769-for bruss-making, V. 277-air-furnace for easting cannon, VI. 182-1everberatory furnace, 178-number of, in Great Britain, VIII 726-for smelting lead, XIII. 298, 299-blast furnace, XII. 545, 546 - cupola furnace, 545; hot-blast furnace, 547, 548, 549, 550
—coining, VII. 87—glass-making, X.
661, 672, 674—plans for the prevention of smoke in, XX. 354-hot-house, XI. 720—smoke-consuming, 720—current of air in, XVIII. 80.

FURNEAUX ISLANDS, X. 360.

- (Tobias), his voyage of discovery, IV. 253. FURNES, town of Belgium, X. 360.

Furniture, works on, A.H. 806.

of guns, XI. 100.

Furnival (Lord), in Ireland, XII. 472. Furnival's Inn, XII. 385.

FURRUCKABAD, town in Hindustan, X. Furs, animals producing, X 347-preser-

vation of, 349—manufacturing of, 350—carroted fur, 351—used in hat-making, XI 240, 241-of the Aleutian islands, IL 465—destruction of moths in, XXI. 549.

in heraldry, XI. 325.
Fürst (Julius), on the monosyllabism of the Semitic languages, XVII. 533. FURSTENWALDE, in Brandenburg, X. 361.

Furte, in Bavaria, X. 361 FURTHCOMING, in Scots law, X. 361.

Fuize. See Gorse. Fusaro, lake, XX. 239.

Fuse, or Fuze, in artillery, X. 861; XL 141, 142—Boxer's improvements on, IIL 702.

Fuser, in clock-work, X. 361-in watches,

FUSELI (Henry) X. 361-his definition of genius, 450 - merits of his works, XVII. 79, 80 on Rembrandt, XIX. 6on Sir T. Lawrence, AIII. 297-of mincrals, XV. 63.

Fusi, mountain XII. 688.

# FUS-GAD

Fusibility of metals, VI. 482. FUSIBLE METAL, X. 362. Fusik, X 362. - in heialdry, X. 362; XI. 330 FUSILIERS, O1 Fusileers, X. 362 Fusinieri (D1), on electrical light, VIII 548—on the transport of ponderable substances by lightning, 584 Fuslee era, VI. 676 Fuss (Mr), on the strength of materials, XX 760.

Fust, in architecture, X. 362 —— (John), X. 362, XVIII, 527, 528, 529—his types, XXI 401
FUSTIAN, X. 363.

- in criticism, X. 363. Fustic, dye-stuff, X. 363, VIII 295, 318 FUSTUARIUM, X. 363 Fusulina, fossil shells, XVII 94, 93

Futteh Mohammed, VII 599 FUTTEHGHUR, town in Hindustan, X. 363 FUTTEHPOOR, town in Hindustan, X 363 FUTTERPORE, town in Hindustan. X 363. FUTTOCKS, m a ship, X. 363

Future state, belief of North American Indians in, II. 681-not believed in by ancient nations, I 462—never generally admitted among the ancient philosophers, 1b -Aristotle's disbelief of, 1b; Cicero's, 462, 463 - conduct of the Athenians during a severe pestilence, a proof of their disbelief in, 460, 461-notions of the ancient pagans respecting, 459-formed no part of the Mosaic 1eve lation, 473, 479—when the behef became prevalent among the Jews, 475, 476-faint indications of the doctrine in the books of the prophets, 474passages in the books of Moses which have been supposed to relate to, 477belief in, very general among the Greeks, IV. 216 — how regarded in ancient Egypt, VIII 439—the doctrine of, as a cause of the progress of Christianity, VI. 635, 636.

tense, X 766. Futwa, town in Hindustan, X. 363. FYNE, (Loch) in Aigyleshire, X 363; XIX. 795—its fishenes, III 526—herring fishing in, IX 636, XII 235. FYZABAD, town in Hindustan, X. 363.

# G

G, letter of the alphabet, X. 364-in abbreviations, II 18 GABARA, in antiquity, X. 364. GABARDINE, a diess, X. 364 Gabbio Rosso, in Tuscany, XXI 393 GARLL, French tax, X. 364, 251; XXI. Gabia, mountains in Brazil, X. 440 GRANDE, Spanish town, X. 364. GABII, city of Latium, X. 364. GABINIA LEX, X. 364 Gabmius (Aulus), VIII. 471 Gabion, in fortification, X. 364. GABLE of a house, X. 364, III 510 Gabler (Jean Philippe), X. 364.
Gabriel Stonita, X. 365
——angel, X. 365 de Zerbis, IL 756. GAD. X. 365. GADAMES, casis in Sahara, X. 365. XXI. 353 GADARA, city of Palestine, X. 365. Gadd's patent ropes, XIX 410. Gaddesden (John of), XX. 816. Gaddı (T. and A.), painters, XVII. 62. Gadeni, Caledonian tribe, VI 73; XIX. 742; XX. 41. GADES, X. 365 See Cadiz. GADELY, X. 365; IX. 245, 246—of the rein-deer, XIII. 236, 240.

Gadiculus, genus of fishes, XIL 270.

Gadopsis, genus of fishes, XII 273

Gadolinite, mineral, XV. 90.

268, 269,

Gadidæ, or Gadoids, family of fishes, XII

Gadolin of Abo, consequences of his introducing the term specytic heat into science, I. 761.

# GAD-GAL

GADOR, Spanish town, X 365 Gadus, genus of fishes, XII 270 Gaede (H M), his work on insects, IX. GAELIC LANGUAGE, X. 365; XIII. 212; V 374—bibles, IV 704 GERTATIC (Joseph), X. 365—on the pollen of flowers, V. 154
GAETA, town of Naples, X. 366, XX. 240
—bay of, XV 779, XX. 240
GAETULIA, district of Africa, X. 366.
GAFF, X. 366. Gafforio (Fianchino), on counterpoint in

music, XV. 719. GAGE, X. 366 Gahnite, mineral, XV. 85, 87. Gaika, Kafir chief, XIII. 33 Gaikas, Kafrarian tribe, XIII. 33, 35 GAILLAC, in France, X. 366 Gaimard, on the mollusca, XV. 327-on birds of paradise, XVI 766 GAIN, in architecture, X. 366. GAINAGE, X. 366

GAINSBOROUGH, in Lincoln, X. 366 - (Thomas), English painter, X 367; III 713, XVII 79
Gairdner (Di Wm), his microscope, XIV.

Gaisford's edition of Suidas, XX 801. Gast, muscles employed in, III. 42 Gaius, or Caius, Roman jurist, X. 367— his Institutes, VI. 741, 744, 745, XVI 258; XVII. 214. Gajiat, XI 91

Gala-water, VIII 408; X. 368 Galactite, mineral, XV. 75. GALACTODENDRON, milk-tree, X. 367; V 206 See Cow Tree.

GALACZ, or Galatz, in Moldavia, X. 367; XV 312. GALÆSUS, river, X. 367. Galago, genus of mammalia, XIV 145. GALAPAGOS, Islands, X 367 GALAROZA, Spanish town, X 368

GALASHIELS, Scotch town, X. 368; XX. GALATA, suburb of Constantinople, X, 368: VII. 301

GALATIA, X. 368-coins of, XVI 378. GALATIANS, Epistle to the, X. 368 Galaxias, genus of fishes, XII 248 Galaxidæ, family of fishes, XII 248 GALAXY, or Milky Way, X. 869; IV. 86;

I. 843. See Milky Way. Galba, Roman family, X. 369 —— (Sergius Sulpicius), Roman Emperor, X. 369—reign of, XIX. 338. - genus of insects, IX. 106.

GALBANUM, X. 369. Galbaut, governor of Hayti, XI 256. Galbula, genus of birds, XVI. 774 GALDAR, Spanish town, X. 369. GALDO (Santa Maria de), in Spain, X. 369 Gale, order of plants, V. 207. Galeazzo of Mantua, VI. 618. Galecynus, fossil carnivorous

XVII. 171. Galeichthys, genus of fishes, XII. 261. Galeidæ, family of fishes, XIL 322, 323.

SALENUS (Claudius), or Galen, X. 370; XIV. 454; XX. 813—his anatomical knowledge, II. 752—character of his works, 754—on the neives, 814—on the Egyptian method of cooling water, VII. 100-on insanity, XIV 527-on bathing, IV. 501, 502, 504—on vision, XVI 523;

GALENA, city of Illinois, X. 369; XII 362 \_\_\_\_ sulphuret of lead, X. 369; XIII. 298, 299; XV 117, 243—silver in, VI

rs, followers of Galen, X. 369; XIV. 454.

- religious sect. X. 369. Galcocerdo, genus of fishes, XII. 324-fossil, 341; XVII. 118 Galcodes, genus of arachnides, III. 386. Galeopithecidæ, family of mammalia, XIV.

Galeopithecus, genus of mammalia, XIV. 150-teeth of, XVI. 414, 452, 453. Galerites, fossil echnoidea, XVII. 99, 100. Galeritidæ, echmoderms, XXI. 991.

#### GAL-GAL

Galerius, Roman emperor, XIX. 350. Galeruca, genus of insects, IX 150 Galerucitæ, tribe of insects, IX. 150. GALERUS, X. 370, II 449 Galeus, genus of fishes, XII 324-teeth of, XVI. 422

Galgacus, II 247; V 379; XIX. 340 Galgulus, genus of insects, IX 164. Gahaceæ, nat old of plants, V. 196.

GALIANI (Ferdinando), political economist, X. 370—on free agency, I. 197, n 2—on wealth, XVIII 226, n

GALICIA, Spanish province, X. 372; XX.

or Galizia, in Austria, X. 373, IV 309, 312; XVIII 153.
Galien (Joseph), on aeronautics, II 169 Galileans, X. 374

CALLLEE, X. 373, XVII. 182—sea of, 185 -the chief scene of our Savious's min-

ıstry, XII 758, 759

GALILEO GALILEI, X. 374; XII 660; L. 799-first to maintain the law of contimuity in reasoning on motion, 258, 592—Hume's comparison between him and Lord Bacon, 585-on the acceleration of falling bodies, 592, II 72-estimate of his genius, I 593-his discoveries confirmatory of the Copernican system, 607-bi ought before the Inquisition; his sentence, 608—his telescope, 606; II 87; XVI, 528; XXI 117, 118 -his astronomical discoveries, I 607, III 800-on the lever, L 651-on gra vitation, 674—on musical strings, II 110—on the sun's spots, IV 25, 26, 29 his discovenes in pneumatics, 449, L 592; XVIII. 24-Descartes failed to appreciate the meiits of, VI. 278-on the pendulum, I 593, VII 2—on projectiles, XI 103, 107; I 592—on hydrodynamics, XII 70—probable inventor of the microscope, XVI 529—on mechanics, I 591-invention of the sector claimed by, XX. 30-on the law of transverse stiain, 761.

Galinier (M), on the geology of Abyssinia, II. 55

Galitzin, XIX. 476

GALL, or bile, X 382 See Bile or gall-nut, X. 382, V 174—its use in dyeing, VIII. 281,277, 293—oak-bark

a substitute for, in dyeing, 304, n 3—other substitutes for, 305, 306—in making ink, XII. 382—insects producing galls, IX. 172.

-(Francis Joseph), founder of phrenology, X. 382-on phrenology, XVII 556, 557 et seq, 673—objections to his system, 674—his connection with Spurzheim, XX, 519

— (James), his alphabet and printing for the blind, IV. 776; XVIII. 554 — OF GLASS, X 382

(Sr), in Switzerland, X. 384; XX. 882 Gall-bladder, III. 62.

GALLAND (Antoine), X. 385. GALLAS, Abyssinian tribe, X. 385; II 56, 222.

Galle (Dr), his discovery of the planet Neptune, IV. 93, I 830—on the inner ring of Saturn, IV. 92. Galleas, XX. 123.

GALLEGO, Spanish river, X 385. GALLEGOS (San Felices de los), Spanish town, X. 385.

- (Galicians), X. 372. - painter, XVII. 75. Galleon, large shp, X. 385; XX. 123. Galleon, small galley, X. 385. Galleria, genus of insects, IX. 218. GALLERY, in fortification, X. 385.

in the Fine Arts, X. 885—National Gallery, London, XIII 674; in Edinburgh, VIII. 397. GALLEY, X. 885; XX. 117, 119, 128.

Galleys, as a punishment, XVIII. 575.
Galli, priests of Cybele, X. 385; VII. 422.

GALLIA, or Ganl, X. 386, 1. See Gaul. GALLIC ACTO, X. 386; VIII. 281; VI. 515; XIII. 306—in oak, XX. 166, 169

#### GAL—GAM

Gallic alphabet, II Plate Gallichthys, genus of fishes, XII. 297 GALLICISM, X. 386-in Gibbon's style, 615. Gallicolæ, tribe of insects, IX. 192 GALLIENUS (P. Licinius), emperor of Rome, X 386—his massacre of the Byzantines, VI 43—reign of, XIX. 348.

Gallini on the love of dancing, VII 644 Gallmaceous biids, XVI 784, XVII 633 -their habits as to paning, III. 181 Gallinsecta, family of insects IX 171. Gallinula, genus of birds, XVI 807. Gallinules, birds, XVI 807.

Gallio, last Roman commander in Britain, V 380

GALLIPOLI, town in Naples, X. 386, XX.

– in European Turkey, X. 386 Gallo-Græcia, X 368 Gallocanta, Spanish lake, III 393

Gallois (Jean), French author, X 386his opposition to the new geometrical analysis, I. 650

- (M de), his non works, XII 541, GALLON, measure, X 386, XXI 808, 799 et seq-standard gallon, 802, 804.

GALLOON, a kind of lace, X. 386.

GALLOWAY, X. 386; XIII 98—horse, XI. 656, XIII. 100-catile, II 341, XIII 100 —— (Ehjah), his feathering paddle-wheel, XX 656—his steam-boiler, 616

- (THOMAS), X. 387-his article in this work on the figure of the earth, IX. 547, n-on the solar motion, IV. 87, L 846

Mull of, X. 386. - New, X 386; XIII. 100 Gallows. See Gibbet

Galls, X 387—of Aleppo, II. 463. See Gall.

Galluppi on syllogisms, XIII. 624, n Gallus (C. Cornelius), Roman poet, X.

(Cæsar), VII 304 (Cestias), prefect of Syria, XII. 773.

Roman emperor, XIX. 348. genus of birds, XVI. 788. Galmei, mineral, XV 100.

GALSTON, in Ayrshire, X. 387 GALT (John), Scottish novelist, X. 387—character of his novels, XIX, 282—his

Life of West, XXI 836 Galtee mountains, XXI. 285 Galton iron bridge, XII. 584, 586. (Mr), African traveller, II. 211.

GALVANI (Aloïsio, on Luigi), X. 387; I. 959—contrasted with Volta, 958—his first experiments on the nervous system and electricity, 959-progress of his views on annual electricity, 960-his great ment, 1b.

Galvanic battery, XXI. 99, 610 et seg. Sce

Voltaic Electricity, Mail 30, 500 55 55.

Galvanisu, X. 388 — Fabbroni on the chemical origin of, I 954—discovery of, I. 739, 988; VIII. 530; XXI. 609 —

Volta on, I. 963—Sir H. Davy's chemical discoveries by means of, VII. 668, 669animalcules supposed to have been produced by, III 212—Oken on, XVI. 500 -general phenomena of, XXI 621on living animals, 633-its effects after death, 634.

GALVANIZED IRON, X 388 Galvano-plastic printing, XVIII. 554. Galvanography, XVIII 554. Galvanoglyphy, XVIII 544. Galvanometer, I. 976, XXI. 99-marine, 97, 110—mirroi, 99, n, 109. Galvanoscope, gold-leaf, XXI. 648. GALVESTON, in Texas, X. 388

GALVEZ, Spanish town, X 388. GALWAY, Irish county, X 388-fisheries of, IX. 627, 634—agr. stat, XII 516, 517—town, X 391.

GAMA (Vasco da), X 393, 470, 712; XVIII

382, 163—his squadron, XX. 124. GAMALIEL, X. 393. Gamarra (General), IV. 836. Gamasus, genus of arachnides, III. 288. Gambart (Jean), astronomer, L 858-his

comet, ib. Gambasio, a blind sculptor, TV. 781.

# GAM-GAR

GAMBEER, X. 393; V. 196; VI. 332 GAMBIA, river, X. 393, II 214, XVII 646, XX. 51—temperature of the valley of. 50.

Gambier's islands, II 694, XVIII 282.
Gambling, or Gaming, X. 394—in China VL 567-bills for gambling debts, IX

GAMBOGE, X. 395, V 186-in Cambodia, VI. 113.

order of plants, V 186
GAME-LAWS, X. 395 — qualif
killing game, XX. 210 qualification for GAMELIA, mairiage presents, X 397. GAMELION, Athenian month, X. 397

GAMES, public, in antiquity, X. 397— Egyptian, VIII 441, 448—funcial, X 341—of the amphitheatre, II. 729, 731 of the circus, VI 731, 734

Gamman, trout fed on, XIL 242 Gammell (Ernest), action against, for sal-mon fishing, IX. 601.

GAMMONING, sea term, X. 399. GAMMUT, in music, X. 399—Chinese, VI

GAMONEDA, mountains in Spain, X. 399. Gamme, church of, IV. 413 GANDLSA, Spanish town, X 399

GANDHARBA, X 399 GANDIA (Huerta de), district and city of Spain, X 399, 400

Ganessa, Indian astronomer, II. 487 Ganganelli (Pope) See Clement XIV. Gang-robbery, in India, XI 521, 522 Gangas, birds, XVI. 791

GANGES, river, X 400, 401, III 735, XI. 449, 450; XVII 606, 646—resort of pilgrams to, IV 613—inundations of, 648, XVII 606-navigation of, IV. 651 -aqueduct of, III 336-mud deposited by, XV 140, XII 621; XVII 586—delta of, 1b—sources of, X 634; XVII. 601-slope and velocity of, 1b .- gangetic dolphin, XVI 445-physical characteristics of, 87 See Sunderbunds

Gangha, or ganghons, XVII. 669 et seq. lymphatic, II. 805-nervous, 811-in the lower animals, III 176—invertebrata, 185—in mollusks, XV 345 et seg—gang-lionic cells, XVII. 650—insects, IX. 43,

55—globules of, II 811—ganglions in the domestic animals, XXI 558. GANGOOTEI, X. 401, 400, XI. 469. GANGPOOR, in Mindustan, A. 401 Gangrene, XVII. 690—surgical treatment of, XX, 826

Ganita (Bija), Hindu treatise on algebra.

IL 487. GANJAM, town in Hindustan, X. 401. GANNAT, town in France, X. 401. Gannery (M.), his escapement, VII. 13. GANNET, bird, X. 401; III 181; XVI 814 Ganocephala, fossil reptiles, XVII 133 Ganodus, genus of tossil fishes, XVII 119.

Ganoid, order of fishes, XII. 217, 316, 317 -fossil, 332, 333, XVII 119 Ganshaw, in Georgia, VIII. 634 GANTLET, or Gauntlet, X. 401 GANYMEDES, in mythology, X. 401. GAOL, X. 401. See Prisons - DELIVERY, X. 401.

GAONS, Jewish doctors, X 401. GAP, town in France, X. 402 Gapers, shells, XV. 850 Gara (Lough), XIX. 420; XX. 329. GARACHICO, in Teneriffe, X. 402

Garama, IX. 530 GARAMANTES, Libyan race, X. 402; IX. 580. Garanceux, VIII. 318 and n. Garancine, VIII. 318 and n.

Garay (Blasco de), his steam-vessel, XX. 636.

GARBE, in heraldry, X. 402; XI 333 Garcia (Don Jose H.), on fortification, IX. 836.

GARCILASO DE LA VEGA, Spanish poet, X.

402, XVIII. 118
GARD, in Flance, X. 408, 277.
GARDA (Lago di), X. 404; AII. 637; XIII. 644

GARDANT, in heraldry, X. 404; XII. 802. GARDELEGEN, town in Prussian Saxony X. 404.

# GAR—GAS

Garden (Dr), of Charlestown, on the Gymnotus electricus, VIII. 575.

(Dr), on the siren, XIX. 85 frut, XI 697, 702—kitchen, 697 —forcing, 719—flower, 745—calendar, 758—walks in, 747—floating gardens in Mexico, XIV. 722—of the crystal palace, Sydenham, XX 892—town garden, III 494—at Kew, XIII. 75—hanging gardens at Babylon, IV. 341. See Horti-

- seeds, II 337. Gardener's calendar, XL 758.

turnip cutter, II 284.

GARDENING, X. 404-Landscape, XVII 771—Chinese ornamental, VI 593—in Egypt, VIII. 428, 431. See Horticulture

Gardie (La), general, XX 848. GARDINER, in the State of Maine, X. 404 - (COLONEL JAMES), X. 404, XI 178 (STEPHEN), Bishop of Winchester, X. 404; VIII 706, 708 et seq

- (William), on the botany of Forfarshie, IX. 781 Gardiner's Tables of Logarithms, XIII

Gaidner (Mr), on phreno-mesmerism, XX.

440 Gargano (Monte), XX 236 Garget, in domestic animals, XXI 571.

Garibaldi, his victory at Volturno, in 1860, XXI 670 Gar-fish, XII 264

Garighano, river, XIL 638; XX. 237. Garioch, II 32

Garlick, culture of, XI 741. Garlton Hills, XI 177

Garner (Mr), on the boring of shell-fish, XV. 353.

Garnerın (Mons), his descent ın a parachute, II. 179.

GARNET, X. 405; XV 84, XVII. 623crystallisation, VII 562—rock, XV. 135—specific gravity of, XII. 88—lenses of, XIV. 768—doublets of, 774.

- part of the tackle of a ship, X.

Garnett (Richard), his contributions to Celtic philology, XVII 530. Garnier (Marquis), on agriculture, XVIII

236-on price, 243-on indirect taxes XXI. 57.

GAROFALO (Benvenuto), painter, X. 405. GARONNE, river, X. 405, 240, 632; XIII. 696: XVII 647.

(HAUTE), department of France, X. 405

Galouste's burning mirror, VI 10. Garraway's coffee-house, XXI. 89. Garreau on the absorption of plants, V. 103-on the exhalation of leaves, 104 on the heat of Arum while flowering,

Garrett's horse-hoe, IL 275. GARRICK (David), X 406; XVI. 283; XXI. 174, 175—the stage improved by, VIII. 166-anecdote of him and Field ing, IX. 540, n. 3—his intimacy with Dr Johnson, XII. 796; with Gold-smith, X. 708—excellence of his readıng, XXI. 172.

Garrison, X. 407—artillery, III. 693 ———— (W. Loyd), emancipationist, II. 43. GARROTE, X. 407. Garrots, buds, XVI. 816.

GARROVILLAS, Spanish town, X. 407. GARROW HILLS, in Hindustan, X 407. Garrulus, genus of birds, XVI. 764. Garry, river, XVII. 455. Garryaceæ, nat. order of plants, V. 208.

GARSTANG, in Lancashire, X. 407.
GARTER, order of the, X 407; XI. 340--institution of, XIII. 117; VI. 622 - principal king-at-arms, X 408;

XI. 320. - in heraldry, X. 408 GARTH (Sir Samuel), X. 408-example of

wit from, XXI 895.

GARVE (Christian), X 408 GAS, X. 408-term first used by Helmont, XI. 308-method of determining the relative density of gases, I. 727-trans-

# GAS-GAS

mission of sound through, II 104-expansion by heat, I. 935; XI 268—co-efficient of expansion of, I 957 and n. 4 -Gay Lussac on, X. 442-Dalton's researches on, I 934 (see Dalton)—laws of mixed gases, 935-specific heat of gases, 953-effects of electricity on, VIII 597—diffusion of, 26—condensation of, XL 272 - diffusion of heat through, 262; VI 783 - experiments with two gases, XII 102—collection of waste gases of blast furnaces. 552 specific gravities of, VI. 448; XII. 89-atomic volume of, VI. 449—some of them reducible to haunds, XI 272; I. 983; XX 563—illuminating power of, X. 428—coal gas, 409 et seq , XIX. 615—used as fuel, X. 322—law of Mariotte and Boyle on the compressibility of, I. 958-exhalation of, by leaves, V. 104effects of, on leaves, 106; on plants, XVIII 135—Dr Henry on, XI 316 refractive powers of gases, XVI 558— in lighthouses, XIII. 480—general rela-tions of gases, XX 568—solidification of. 1b

Gas-coal, VII 118. GAS-LIGHT, X 409-in lighthouses, XIII 480—in Edinburgh, VIII 406—Glasgow, X. 650—New York, XVI. 231— London, XIII. 665

Gas-meter, X 422-wet, ib.-dry, 423. Gascogne (Alphonse), his work on msects, IX. 23

- French province, X. 434 Gascoigne (Mi), inventor of the micro-meter, XIV. 742 Gascon (John), his adventure against Al-

giers, II. 569.

GASCONY, French province, X 434, 277.
Gascous poisons, XIV 435; XVIII 135—
gascous elements in the crust of the globe, XVII. 618

steam, XX. 570. GASKET, X. 408. Gasometers, X. 418, 420.

Gaspar Soares, inon-works at, V. 299. Gasparis (M. de), asteroids discovered by, T. 859.

Gasse, in Lower Canada, X 434. Gassendi (Picire Gassend), X. 434trast between him and Descartes, I 70 -his diligent study of Bacon, 1b -his partiality for Epicurean physics, 71-his argument against Descartes, 1b -his claim to the discovery of the doctaine concerning the origin of our knowledge, 72-his advantage over Descartes in re-nouncing the doctrine of innate ideas, 73-his merits as a philosopher and writer, ib -his doctrine of ideas, 109his orthodoxy as a Roman Catholic, 248 -his followers, 107, 108-his astronomical labours, 611; III. 801 - meteoric stone seen by, XIV. 630

Gassiot (M), African traveller, II 211. - (Mr), chemical decomposition by means of the pile, obtained by, XXI. 619-his water-battery, ib, 620-on stratification in electrical discharges, 630sounds from electric currents observed by, 631-his process of converting daguerrectype plates into engraved plates, 636.

Gassner's exorcismal cures, XX, 417 Gasterochisma, genus of fishes, XIL 298, 296.

Gasteronemus, genus of fossil fishes, XII. 845. Gasteropelecus, genus of fishes, XII. 246.

Gasterophilus, gad-fly, XXI. 569. Gasteropoda, class of mollusks, XV. 363, 322, 223-fossil, XVII 108-extinct genera of, 115

- monœcia, XV. 369. diœcia, XV. 375.

Gasterosteus, genus of fishes, XII. 210, 281. Gasterotokeus, genus of fishes, XII. 315 Gaston, earl of Foix, VI 613; XIII. 18. Gastorms, genus of fossil birds, XVII. 155. Gastranæ, fossil mollusks, XVII. 108. GASTRIC JUICE, X. 438; IL 782; VI. 523;

XVII. 659.

# GAS-GAY

Gastritis, in cattle, XXI 567 Gastrobranchus, genus of fishes, XII 128 -its respiratory organs, III 113. Gastrochena, genus of mollusks, XV 350

-fossil, XVII 108. Gastrochænidæ, family of mollusks, XV 350.

GASTROTOMY, in surgery, X. 438 Gastrus, genus of insects, IX 246. GATA, towns in Spain, X. 438, 439

(CABO DE), headland, X 439. (RIO DE), in Spain, X 439. (SIERRA DE), in Spain, X 439.

GATAKER (Thomas), X 439. GATEHOUSE, in Knkeudbright, X 439 GATES (Holatio), American general, X

GATESHEAD, in Duiham, N 439. GATH, in Palestine, X. 439, XVII 182, 514.

Gatrone, town, IX 530. GATSHINA, X 440

Gatterer (Prof), on denary numerals, III 579

Gattoni (Abbate), his Æohan haip, AV

Gaubil, his work on insects, IX. 19. Gaucin, Spanish town, X. 440. GAUDEN (John), X. 440

GAUDENS (St), in Flance, X 440, 405 Gaudichaud on the physiology of plants, V 102

Gaugain's gas and vapour battery, ANI 618.

GAUGE, or GAGE, X. 440-in gas-making,

422—in railways; see Guage
Gaucino, X. 440; XIV. 524—in birck
building, V. 733.
Gaul, X. 440, 1, 385—Druds in, VIII.

184—Greek colony at Marseilles, 1b—coinage of, XVI. 361—Cæsar's campaigns in, XIX. 324—Caligula's expedition to, 385

Gauls, V. 373-their belief in the immortality of the soul, VI. 636, 637-th ir invasion of Germany, X 574—Rome taken and burnt by, XIX. 302.

Gault, m geology, XV 110.

Gaultier on the skin, II 834
Gaunt (John of), V. 685; XIII. 178,

VIII. 685 Gauntlet, X 401.

GAUSS (Karl Friedrich), X 440; I 993, his method of computing sceular inequalities, 811 - his researches on terrestrial magnetism, 993; XIV. 17 -his new magnetical instruments, I. 993 -his magnetical observations at Gittingen, 994 - on the manner of inscribing a polygon in a circle, 11. 564; I 701, 998-his correction of Laplace's theory of capillary attraction, XII. 100 -his mathematical theory of terres-trial magnetism, I. 994-his theorems concerning attractions, ib. - his greet merit, 995-on the general theory of quadratic factors or impossible roots, 712—on equations, IX. 308—on the planets Pallas and Vesta, IV. 68, 68 on comets, VII. 168, 181—on the inferometer, XIV. 744—on probability, XVIII. 634, 635.

Gautama, V 724. Gauthey (M), on iron bridges, XII. 575, 579-on the strength of stones, XX.

717, 718, 759.

GAUZE, X. 440—wire-cloth, ib.—manufacture of silk gauze at Paisley, XVII. 89—weaving of, XXI. 780.

GAVEL-KIND, X. 441; V. 886; XVIII. 516.

Gaveston (Pierce), VIII. 681.

GAVIA, mountains in Brazil, X. 440.

GAVIA-GRANDE, Spanish town, X. 440. Gavialis, reptiles, XIX. 23. Gavials, XIX. 23—tecth of, XVI 417.

GAVIAO, Portuguese town, X. 441. GAVOTTA, dance-tune, X. 441.

GAWELGUR, fortress in Hindustan, X. 411. Gawler (Colonel), governor of South Australia, IV. 294. Gawnagh (Lough), VI. 347. Gay (Claudio), his work on Chile, IX.

# GAY-GEL

GAY (John), poet, X. 441—moral tendency of his Beggars' Opera, VIII 165—death of, XVIII 332

(Rev. Mr), his dissertation on virtue, I. 170-suggested to Hartley the idea of association, 380

GAY-LUSSAO (Nicolas Fiancois), X 442: L 939, 940-his balloon ascents, IL 181-183, I 939-his portable barometer, IV 466—on assaying, III 771—on the expansion of the gases by heat, I 935 on electricity, VIII. 580-on the electricity of the torpedo, 573-his law of volumes in gases uniting chemically, I 938—on capillary attraction, XII 92, 94, 95, 98—his miscellaneous experiments, I. 940-his analysis of cast-non, VI 179-on evaporation, IX. 409-on gases, XX. 562, 563—on the elastic force of gas produced by the ignition of gunpowder, XI 109

GAYAH, town in Hindustan, X 442. Gayal, in zoology, XIV 215 GAYATRI, a verse of the Vedas, X. 442. Gaylussite, mineral, XV. 98

Gaza, in Palestine, X. 443; XVII 182 514—taken by Alexander, XIII 767 GAZELLE, X. 443, XIV. 210, VIII. 432 GAZETTE, X. 443—London Gazette, XVI 182-de France, 196

GAZTELUGACHE, Spanish island, X. 444. Gean tree, XI 712.

Geary (Admiral), V. 494. Gebel-es-Silsileh, in Egypt, VIII. 503. Gebel-et-Teyr, in Egypt, VIII 504. Gebhardt (J G), his work on insects, IX 18

Gebler (Francis), his work on insects, IX

Gecarcinus, genus of crustacea, VII 541 Gecko, 1eptile, XIX 35 Geckotidæ, 1eptiles, XIX 35.

Ged, the common pike, XII 254 (William), inventor of stereotyping, X. 444, XVIII 519

Geddes (Alex), X. 444—on the Scottish. language, VIII 797—on Tyndale's Bible, XXI 400.

Gediosia, march of Alexander the Great through, XIII 771.

GRELONG, in South Australia, X. 445; IV. 288, 290 et seq Geer (Charles de), Baron, his work on in-

sects, IX. 4—his classification of insects, 5-on ants, III 261

Geerardt, Prince of Orange assassinated by, XI 571

Geez language, II 57.

GEFLE, town in Sweden, X 445, XX. 864. (\*EHENNA, X. 445. Gehin (J. B.), his catalogue of insects, IX.

Gehlenite, mineral, XV 73 Geijer, Swedish author, XIX. 700. Geisler (Frederick), on anonymous books, IV. 711.

Gekrosstein, mineral, XV. 96 GELA, in Sicily, X. 445; XX. 899—taken by the Carthagmian, VI 282

Gelalæan era, VI 674. GELASIUS, name of two popes, X 445 GELATINE, OF Jolly, X 445; IX 757, XVII 654-its qualities as a nutriment, VIII 19-abounds in some fishes, III. 93-its

use in photography, XVII. 549. GELDERLAND, or Guelderland, X. 446, XI. 79—climate, 582.

Gelee (Claude). Sec Claude Lorraine. Gelicus' hive, IIL 295.

Gell (Sir William), X. 446-his work on Pompeli, XVIII. 288.

GELLERT (C. Furchtegott), German author, X. 446.

- (M.), on capillary attraction, XII.

Gellibrand (Henry), on logarithms, XIII. 554, 555—on the compass, XVI 5 GELLIUS (Aulus), X. 446; XVII. 519 GELNHAUSEN, town of Hesse-Cassel, X. 446.

GELOW, tyrant of Syracuse, X. 446-his defeat of the Carthaginians, VI. 281reign of, XX. 899.

# GEM-GEN

GEM, X. 446; XV 87; XVII 623-mode of cementing, VI 368—crystallization of, VII 555, 562, 563—counterfeit, VIII 113-in Germany, X 584-lenses of, XIV. 765 et seq —microscopic cavi-ties in, 806—magnetism of 27—cutting and polishing, XIII 231 See Diamond, Pearl, Ruby, Sapphire, &c, and the Geographical articles.

GEMARA, second part of the Talmud, X. 447; XXI. 15, 16

Gemimus of Rhodes, X. 501. GEMINI (the Twins), constellation, X. 447, IV. 12, 80.

Geminus on geography, X 467. GEMISTUS, or Georgius Pletho, X. 447. Gemmation, mode of reproduction, in mollusks, XV 331-333

- in plants, V. 68 Geminiani (Francesco), violinist, X 447 Gemminger (M.), his work on insects, IX.

GEMONLE SCALE, X. 447. Gempylus, genus of fishes, XII 296 GENALGUACIL, Spanish town, X. 447. GENDARMERIE, X. 448, 272 GENDER, in grammar, X. 448, 747, 789 Gené (Giuseppe), his works on insects,

GENEALOGY, X. 448.

General, X 448 — Assembly of the Church of Scotland, X. 448, III 775, XVIII 493—discontinued by James I, V. 384 - of the Free Church, XVIII 495 GENERALISSIMO, X 448-qualifications of,

XXI 698, 699 Generalization, XIV 590

Generating Line, in geometry, X 448
Generation of animals—of vertebrata. 772—mammalia, 774—animalcules III 199—ants, 264—bees, IV 581, 584
—insects, IX. 74—mollusks, XV. 381
et seq—batrachian reptiles, XIX. 75,
ophidian, 50—zoophytes, XXI. 973 et seq -points of resemblance and difference in reproduction of plants and animals, III. 170 - hybrids generally barren, 174, 175-equivocal generation, 175-species said to be produced from vegetable seeds, 200, 204—succession of blind children in families, IV. 777 castration, VI. 329. See Fecundation, Reproduction.

(organs of), in man, III. 3-anatomy of, 68—their muscles, 39in brutes, 113-crustacea, VII 539.

GENERATOR, in music, X. 448
Genesee river, falls of, XVI. 214.

harbour, XVI 214—flats, 215.
Genesis, book of, X. 448; I 449 et seq., XVII 400.

—— in geometry, X. 448 Genesius (Josephus), X 448. Genet, one of the mammalia, XIV. 166. GENETIILIACI, X. 448.

Genetta, genus of mammalia, XIV. 166. Geneva, X. 449; XX. 882—Sir James Mackintosh on the independence of, IV. 391 — Bible, 702, XIII. 127 — library at, 424 — mean temperature of, XX 889—population and mortality, XV. 621, 622—stop, in watches, VII 28—coins, XV. 441—political troubles in the year

1782, VIII 240—suicides in, XX. 800
— Lake of, X. 449; XIX. 633; XX
888—its temperature at different depths, VI. 777-variation of its level, XX. 889 -charr in, XII. 241-salmon trout of, 949

or Gin. X. 449, 629; VIII 51 town in Ontario, X. 449. GENEVIÈVE (Sainte), patron saint of Paris, X. 449

- library of, XIII. 408. - (St), town in Missouri, XV. 281. Genèvre, Mont, X. 450

Genga (Bernardin), his surgical anatomy, II. 766.

GENGHIB-KHAN, Tartar chief, X. 451; III. 745; XI 478—Bukhara laid waste by, V. 759—his invasion of China, VI 559, 561 ; III. 745.

#### GEN-GEO

Genieys on hydraulics, XII. 140 GENII, X. 450-of Mohammedans, XV.

GENIL, river of Spain, X. 450 GENITIVE CASE, in grammar, X. 450, 748
GENIUS, tutelary spirit, X 450—Greek and Roman belief respecting genii, III 310 See Dæmon

in literature, X 450—its relation to insanity, III 321

of a language, XIII 188. GENLIS (Comtesse de), X. 451 Gennaro (San) See Januarius (St) Gennes (M. de), his mechanical powerloom, XXI 787

Gennesereth, Lake of, XVII 185-land of, 186

Gennet, order of the, XIII 120 GENOA (Duchy of), X 451; XIX. 640city of, X. 452-Academy of Sciences at, II. 63—commerce of, VII 186—its colonies on the Black Sea in the thirteenth century, IV. 745 — seized by Napoleon, X. 136, n 2—coins, XV. 441, 443-early navigation of, XVI 2-insurrection at, in 1849, XII. 658—manufactures of, XIX. 634—vessels trading with, in 1850-54, 635 — weights and measures of, XXI 805, 811—university of. 492.

Gulf of, X. 454 township in New York, X 454. GENOVESI (Anthony), X 454, I 202. GENS, in Roman antiquity, X. 455 GENSERIC, king of the Vandals, X. 455, 577—sack of Rome by, XIX. 363 GENTIAN, plants, X. 456; V. 114, 200, XI

748. Gentianaceæ, nat. order of plants, V 200

GENTILE, X 456-relation of the Gentiles to the Mosaic law, I 467 GENTILESCHI (Holatio), painter, X. 456
GENTILIS (Albericus), X 456—his merits as the precursor of Grotius, I 25, 26,

233. GENTLEMAN, X. 456; VII 205 - USHER of the Black Rod, X 456gentlemen ushers of the pravy chamber,

and n. 1-an apologist for Machiavelli,

XI 775. Gentleman's Magazine, VI. 350 Gentlemen-at-arms X. 456; XI 775 Gentlemen-pensioners, X 456 XI. 776. Gentles, larvæ of flies, used for bait, III. 155.

GENTOOS, X 457; XL 474. Gentz on the balance of power, IV. 387, 388, 390

Genucius, Roman tribune, XIX 300. Genumeness of the Scriptures, XIX. 829. GENUS, X. 457.

in music, X. 457.
in natural history, X 457tion of, V. 175-sub-genus, 175-distribution of genera of plants over the globe, 222—uncertain limits of genera, XVI. 786.

GEOCENTRIC, in astronomy, X 457. Geocorisæ, family of insects, IX 161. Geocrinus, fossil echinoderms, XVII. 98 Geodes, in hthology, XV. 132, n 1 GEODESY, X. 457—figure of the earth from,

IX 560. Geoffroy, his work on insects, IX. 6—on pollen, IV. 572—a bad authority on ants, III 261

of Monmouth, X. 457—his account of Stonehenge, XX 709—William of Newburg's opinion of his history, XXI. 868.

- SAINT-HILAIRE (Ellenne), X. 457. Geognosy, XV. 129

GEOGRAPHY, X. 459-history of geographical discovery, 1b — mathematical, 479—physical, XVII 569—political, ib. descriptive, ib—geographical academies of Venice and Lisbon, II. 62— D'Anville's improvements of, III. 289mode of teaching it to the blind, IV. 777—improved by the Crusades, VII. 534—Edrisi's work on, VIII. 412—geo-graphical distribution of plants, V. 219, 222; XVII. 624-of animals, 1II. 174;

# GEO-GEO

II. 712; XVII. 630-of birds, 633-of insects, IX 63-reptiles, XVII 634serpents, XIX 50, 51—fishes, XII. 329; XVII. 634—illustrations of, from coins and medals, XVI. 351-benefits it derives from palæontology, XVII 91knowledge of, among the Persians, 430 -its relations to philology, 526, 527-Strabo's, XX. 744 See Earth, Physical Geography, and names of countries, towns, rivers, &c.

Geokronite, mineral, XV 119 GEOLOGY, X. 496; XV 127, XVII. 570, 586-internal structure of the earth, I 791-the principle on which the Mosaic account of the Creation is to be interpreted in reference to geology, -cases of subsidence in the earth's surface, II 51 - geology of Mount Æina, 192—America, 670—Alps, 626— Andes, III. 129—Assam, 763—England, VIII 716—Egypt, 423—its connection with the origin of soil, II. 389, with nicheology, III 419—emergence of islands from the ocean, near the Azores, IV 336—Falls of Niaraia, VI 135— IV 336-Falls of Niagaia, VI 135internal heat of the earth, 768-scuptuial date of the Cleation, 677—final conflagration, VII 241—the Deluge, 722—erratic blocks, 723—scratches on 10cks, 1b -- Dolomieu on, VIII 95, 96geological relations of insects, IX 72the earth's figure proves its former flindity, 575-elevation of Norway, XVI 310, n—geological distribution of gold, XV, 231—of the Himalayas, XI, 443—of the state of New York, XVI, 214 first appearance of man on the carth, XI 540; XVII 641-value of palmontology to, 91—table of strata, and order of appearance of animal life on the earth, 92-of Scotland, XIX 790logical theory of volcanoes, XXI 606-See Palæontology, Fossil, and the geographical articles in general.

Museum of, in London, XIII 674; XXI 323

GEOMANOY, X 496 Geomelania, genus of mollusks, XV. 375. GEOMETRIC PROGRESSION, X. 563; XVIII. 639

Geometrical proportion, II 501-magnitude, X. 506.

GEOMETRY, X 497-history of, ib -plane, 507-of solids, 532-the genius of the Greeks beautifully displayed in, I 551, 696, 697—contributions to, by Euclid, Archimedes, and Apollonius, 551-geometrical analysis, ib -works of Regiomontanus, ib.—introduction of trigonometry and decimal fractions, ib-Werner, Benedetto, Maurolycus, and Cavalleri, 552-exhaustions of the ancients, ib, 553—idea of quantities infinitely great and small introduced by Kepler, 554-generation of solids, ib.-Kepler's view of the composition of circles, ib .- observations on lines and areas, ib .- purpose served by the doctrine of quantities infinitely small in size and infinitely great in number, 555 -the cycloid, 1b -results of the appli-cation of algebra to, 560-Descartes' Geometria, ib - Fermat's method of drawing tangents to curves, 501-geometric and algebraic method of treating quantity, ib -high value set on the geometrical construction of problems by the Grecks, 699—attempts to ascertain relation of diameter to circumference, ib -- incommensurability of the circle, 700-best elementary works on, ib., n. 2 -clementary plane geometry rests on the combined properties of the straight line and the circle, ib.—instruments required in solving the common problems, 701-lines and curves of the second order, ib .- improvement made in trigonometry during the last century, ib .-Descaries' discoveries, 710-application of algebra to, VI. 278; II. 486-Dr Beddoes on the nature of evidence in,

1 V. 566-characters of abbreviations in,

#### GEO-GEO

VI. 419-intimate connection of dynamics with, VIII 358-applications of the fluxional calculus to, IX. 744—Egyptian knowledge of, VIII. 442—its use in joinery, XII. 805—its connection with geography, X. 467. See Angle,

Cucle, Trigonometry, &c.
Geometry (analytical), X. 542; I. 807 - (New), state of the sciences when Newton arose, I. 634-problem of the quadrature of the circle solved by, ib. -Wallis's arithmetic of infinites, ibdiscovery of fluxions by Newton, 635 -Newton the first, and Leibnitz the second, inventor of the new infinitesimal analysis, I 636—controversy relative to the discovery, 637 et sea its vast importance, 640, 641-steps by which the mathematical sciences were prepared for the new analysis, 641this analysis first appeared in the method of exhaustions, 1b -advanced a step in Cavalieri's method of indivisibles, ib - Descartes' application of algebra to the geometry of curves, ib -Cavalieri's method improved and extended by Torricelli, Roberval, &c, ib. lastly appeared Newton and Leibnitz, who made their discoveries separately, 642-rejection of the higher powers of the differentials by Leibnitz hable to objection, ib -the two problems into which the analysis, thus constituted, is divided, ib, 644 — manner in which Newton proceeded, 642—the fluxionary and differential calculus two modifications of one general method, 643-the introduction of the analysis greatly enlarged the domain of the mathematical sciences, ib .- problems of maxima and minima to which it was extended, ib is peculiarly adapted to physical re-searches, 644—problem of integration, -new analysis first published by Leibnitz, 646-writers by whom it was explained and improved, 647, 648 —its firm establishment in Europe, 648 —English mathematicians fell behind the French in the integrations of differential or fluxional equations, 649opponents of the new method, ib .-- contributions to the science by Cotes, Taylor, Bradley, Maclaurin, &c, 692, 714, 715—contributions of Italians to the higher calculus, 715—Euler's method of determining particular integrals, 1b .extension of the modern calculus by that of partial differences, ib -application of it by Euler and D'Alembert, 716—calculus of variations, ib.—distinction between differentials and variations, ib. -integration of differential equations, ib .- modifications of the theory of infinitesimal calculus, ib -the method of prime and ultimate ratios preferred by Newton, 717—improved by Robins and Landen, ib -method of derivative functions, 1b. - works on prime and ultimate ratios, 718, n. 1. See Calculus, Fluxions, Newton, Descartes, &c.

Geomys, genus of mammalia, XIV 185 Geophilus, genus of myriapods, XV. 750-

of birds, XVI. 794. George I., X. 563—his reign, V 452 death, 457-navy, XVI 93.

- II., X. 563—his conduct at the battle of Oudenarde, V. 451—his 1cign, 457—death, 464—Sir R Walpole's excise-scheme, in the reign of, 457; XXI. 692-his gift to the British Museum,

XIII 889—navy, XVI 93.

III., X. 563—his reign, V. 464—filst illness, 469—opposition to Mr Fox's India bill, 510—attempted assassination by Margaret Nicholson, 521—illness in 1788, 530—recovery in 1789, 538—insulted by the mob in 1795, 557-his anti-catholic feelings, and opposition to Lord Howick's bill, 600 — illness in 1810, 611— Duke of York vested with the custody of his person, 623—his death, 624—character, 626; XVII 736—corn acts of 1773, 1791, 1804, 1814, VII. 380,

#### GEO-GER

381-subsequent history of the corn laws in his reign, 382—act regarding the comage, 76-remodelling of the mint, 80—navy, XVI. 94—prosecutions of the press under, 185—state of the navy in his reign, XX. 133—equestrian statue of, at Windsor, XXI 838

GEORGE IV, X 563—his establishment as Prince of Wales, V 507—his pecuniary embarrassment in 1787, 522—discussions on his right to the regency, 531, XVII -his debts, V 556-appointed regent, 611—accession to the throne, 624—history of his reign, 626-conduct of his consort, 612, his hatred of her, 628his dislike to the Catholic question, 654 -his death and character, 657-corn laws in his reign, VII. 382-his visit to Ireland, XII 501; to Edinburgh, VIII 393—his gift to the nation of the library of George III, XIII. 390-navy in the reign of, XX 133

(KNIGHTS OF ST), X 563; XI 340. LAKE, in state of New York, X. 564; XVI 214.

(ST), island, X. 563; IV. 668 (ST), of Cappadocia, X 563, XIII

(ST), cross of, X. 563. (ST), religious orders of, X. 564. (St), one of the Azorcs, IV 336

(St), or Madras, XIII. 802. the Olympian, XI 23.

George's (St), Chapel, Windsor, XXI 881.

(St), Hall, Liverpool, XIII. 521

(St), Sound, IV 299

Georget (M), his experiments on animal magnetism, XX. 427 Georgetown, in British Guiana, X. 564. XI 83-in Columbia, X 564-in South

Carolina, ib —in Grenada, XL 58 Georgia, North American state, X 564; XXI 419-newspapers of, XVI. 195rate of interest in, XII 432-colonization of, XXI 433-debtof, 428-its oppo-

stion to the union, 441—wines of, 888—in Asia, X. 566; VI. 341, 342 alphabet of, II 615-language, XIII. 215, 216—conquered by Alp Arslan, II 604—people of, IX. 346—annexed to Russia, XIX. 485

Golf of, X 569 Georgian islands, XVIII. 280. - versions of the Bible, IV 701. Georgic, in poetry, X 569 — Virgil's Georgics, XXI 595.

GEORGIUM SIDUS, X. 569, III 807. See Uranus.

Georychus, genus of mammalia, XIV. 183. Geoteuthis, fossil cuttle-fish, XVII 114 Geotrupes, genus of insects, IX. 121 GERA, city of Reuss, X. 569.

GERACE, town in Naples, X. 569. Geraniaceæ, nat. order of plants, V. 187 GERANIUM, genus of plants, X. 569; V. 187; XI. 758.

GERARD (Alexander), X. 569-on beauty, IV. 538, 540

(Dr), traveller among the Himalayas, XI 447, 450

(FRANÇOIS), X 570. (Marshal), his expedition against Antwerp, X. 208; IX. 826—president of the council, X. 210

GERARDE (John), herbalist, X. 570. Gerardus Niger, IX 523 Gerber (Francis), his work on anatomy,

II. 770. Gerbert, his alleged introduction of the Arabic notation into Europe, L 556; TTL 581.

Gerbillon's geographical discoveries in Asia, III. 754.

Gerbillus, genus of mammalia, XIV. 182. Gerdesius on rare books, IV. 709. GEREZ (Serra de), mountain chain, X. 570. GERGAL, Spanish town, X. 570 Gergonne, his investigation of a problem

of Apollonius, III. 302. Gerhard (B), his work on insects, IX. 23

- (Paul), poetry of, XVIII 118. - his definitions of theology, XXI on theology, 185 et seg.

# GER—GER

Genzim, XVII. 183-temple of, IV. 695. Germ. See Germs. Germa, in Fezzan, IX, 530 GERMAIN-EN-LAYE (St), X. 570 Germaine (Loid George), V 498. GERMAN, in genealogy, X, 570.

empire, VIII 653 language, IX. 392, 393; XIII 210 its value in philosophical nomenclature, I 311-academy for its improvement, II 70—improved by Adelung, 138—German Bibles, IV. 701—Low and High German, X 587. - Ocean, XVI 298

philosophy contrasted with that of France, I 186, 187—the impropriety of certain German philosophical terms. 219, 220 - ethical systems, 428 Kant, &c

(SAN), in Porto Rico, X. 570. SILVER, X 570

stove, XX. 739 theologians, their opinions of Jesus Christ, XIL 762

Germanic Union, XII. 363. Germanicus (Cæsar), X. 570, 575; II 423, XIX 334.

Germans (ancient), VI 220, X 572— origin of chivalry among, VI 602 their appreciation of the female sex, 606-Roman wars with the, VII 304, XIX. 319, 334, 333 et seq - slavely among, XX. 320

(modern), X. 587—their intellectual character, IV. 212—character of the Austrians, 318—their notions respecting the personality of Homer, XI 596, 597-their title of Graaf, VII 466 -defensive systems of fortification, IX. 835

- (St), in Cornwall, X 571 GERMANTOWN, in Philadelphia, X. 571,

GERMANY, X 572; IX. 400-history of, X. 572—Anabapists in, II. 742—swarms of ants, III. 265—agriculture, II 253—pointed architecture, III. 447, 448—influence of the Italian school of architecture, 458—army of the Germanic confederation, 652—Germanic league, V. 517—bookselling in, 31—concubinage in, VII 229—copyright, 359—cotton manufacture, 460—its state in the time of the Crusades, 529-drama, VIII 167-shipping employed in trade with England, 741—early engraving in, 800-empire of, 653-classical learning, -fairs, 468-French invasions of, X. 101, 161-French trade with, 259glass-making in, 664 - persecution of the Jews in, XII. 778, 782-libraries, XIII 417—medical jurisprudence, XIV 422, 423-miocene rocks of, XV 214lead mines, 242—money, 436; XVI. 389—monarchy, XV. 413—mysticism, 756 -results of education in, 818-insurance offices in, XII 413-study of metaphysics, XIV. 610-literature, X. 693; XI 348—newspapers of, XVI. 200; statistics of, for 1849, 201—historical writers of, XI 549—birds, XVI. 730 school of painting, XVII. 74, 76-papermaking, 261-revival of classical learning in, 522 - scholarship in, 524-new phase of philology in, ib.—its philology compared with that of England, 525 heights of mountains in, 643-poetry of, XVIII 118—pottery, 433—Presbyterianism in, 485—the Reformation in, 821 et seq.—civil war of 1525, ib.—railway statistics, 787-romance, XIX. 264, 290-Roman invasion of, 333 - school of sculpture in, 865—roads, 229—magnetic somnambulism, XX 442-wars of Gustavus Adolphus in, 849-masonry, 711 - beet-root sugar, 798 - theologians, XXI. 183—weights and measures, 811wool imported from, 907—wines of, 885—maps of, X. Plates. See German, Germans.

Germar (E. F), his work on insects, IX. 15.

Germen, in botany, X. 594.

# GER-GIA

GERMINATION, X 594, V. 162, XI 693changes that take place during, II 382, V. 165; VI 518, 519

Germs, production and discharge of, XVII 682—fecundation of, 683. Geron, genus of insects, IX. 233. Gerona, Spanish city, X 594 GERONTES, X. 591

Genes, genus of fishes, XII 288. GERRHA, Arabian city, X. 595 Germs, genus of insects, IX. 164. GERS, in France, X 595.

Gersdorffite, mineral, XV 116. GERSON (Jean Charlier de), X. 595-doctrines of, L 326 — his claims to the authorship of the Imitation of Chilst. XIII 61.

Geisten (Prof), on dew, VII 766 GERUND, in Latin Grammar, X 596. GERUSIA, Spartan Assembly, X 596, 594; XX. 502.

Gervales of Tilbury, historian, X. 596 Gervalha, genus of mollusks, XV 348— fossil, XVII 106

Gespanus (F H. Wilhelm), X 596—lus
Thesaurus, XVII 526—on the language
of Scripture, XIX 834.

GESNER (Conrad), naturalist, X. 596, XIV 461-on animals, 124-on entomology, IX 2-on ornithology, XVI 725

Gesneraceæ, nat. order of plants, V 200 Gessler (Hermann), XX 884, XXI. 146. GESSNER (Solomon), painter and poet, X. 598—his poetry, XVIII. 119
Gestation, period of, IV. 492, n 1—in the

lower animals, III. 182.

Gesture, III. 40-language of, VII. 677. Geta, XIX. 346. GET#, X 598; VII. 615. GETHSEMANE, X. 598

Gex, French town, X. 598. Geyser, X 598; XII. 201, 202—simple mode of imitating the phenomena of, XVII. 602.

Gez, IX. 173 GHADAMES, X. 598, 365. Ghagra, river in Oude, XVII. 15. Ghaleb, a sherif of Mecca, III 350, 364.

GHARA, in Hindustan, X 598, XX 843. Gharian, in Tripoh, XXI, 352, 353. GHAUTS, X 598; XI, 449 et seg.; XVII. 598-height of, 644 - Western, X 599.

Ghawazee, Egyptian dancing girls, VIII. 448.

GHAZERPORE, town in Mindustan, X. 599. Gliebers, or fire-worshippers, VI. 841. See Guebres.

Ghenghis Khan. See Genghis. Gues, kind of butter, X 600. GHEEL, town of Belgium, X. 600. Ghench. See Kenell.

GHENT, X. 600—university of, IV. 620; XXI. 402—schools at, IV. 621—library of, 623-pacification of, XI. 569. Ghergong, in Assam, III. 763. GHERIAH, fortress in Hindustan, X 602.

Ghetaldus (Marinus), geometer, X 504. Guidelin faction, X. 602. See Guelpha. GHIDERTI (Lorenzo), sculptor, X. 602; XVII 61; XIX. 860.

GHILAN, Persian province, X. 602. GHIRLANDAIO, X. 603. See Corradi. Gilizni, in Afghanistan, X. 603; 11. 208empire of, III 744, XL 478. Gholab Singh, VI. 309.

Gnoon, or Ghour, in Afghanistan. X. 608. Ghoorcahs, Ghoorkhas, or Gorkhas, X. 717; XVI. 144, 147, 148— their aid to the British in the Sepoy insurrection of

1857, 314, GHOST, X. 603. See Apparitions. Ghost-moth, IX. 211.

Ghuzni. See Ghizni. Ghuzz, Memlook tribe, VIII. 487. GIANNONE (Pictro), X. 603.

GIANT, X. 604—battle of glants, XX. 885. mountains, XIX. 171.

GIANT'S CAUSEWAY, X 605; III 284; XII 504—rock composing the, XV. 138, n. l. 190.

GIAOUR, X. 606.

# GIA-GIL

GIAVENO, town of Italy, X. 606 Gibb and Dean (Messrs), their steam-engine for draining the Haailem Meer, XI. 173.

GIBBET, X. 606.

GIBBON (Edward), X. 606; XX. 840—his estimate of the talents of Crousaz, and account of his own studies in 1755, I 106, n 4-tendency to indecency in his writings, 154-on the works of St Ambrose, II. 664—converted to Popery by Bossuet's writings, V. 60—on the se-condary causes of the propagation of Christianity, VI. 635, Lord Hailes' answer to, VII 635, 636—his account of Daphne, 654—his ments as a historian, XI. 548-his library, XIII 424-his house at Lausanne, 250-character of W. Law by, 296—on the destruction of the Alexandrian library, 381, n 8—on Mohammedanism, XV. 300 et seq -on Simeon Stylites, 407 - on Giannone's history, X. 604-his notice of Neckar, XVI 127—his History of the Decline and Fall of the Roman Empire, XI. 54) -his enthusiasm for history, XII 2on Ossian, XVII 5—on the state of the Jews under Antoninus Pius, 195-on monopolists, 318-Dr Robertson's correspondence with, XIX 232-Whitaker's Review of his Roman History, XXI 851 GIBBONS (Grinling), wood-carver, X. 617. - or long-armed apes, XIV. 139.

GIBBOUS, X. 618. Gibbs (James), his style of architecture, III. 455.

GIBEON, in Palestine, X. 618

Giblites, XX 904

GIBRALEON, Spanish town, X. 618. GIBRALTAR X. 618-taken by the British in 1704, V. 448-siege of, by the French and Spaniards, in 1705, XIII. 302—siege of, in 1780, III 518; V. 493, 501; VIII 638-weights and measures, XXI, 811 -expenditure upon, VII 147.

(BAY OF), X. 620 ——— (STRAITS OF), X. 620—currents in, IX 409; XIV. 470, XVII. 573
GIBSON (Edmund, D.D.), X. 620 - (Milner), his resolution regarding

the newspaper stamp-duty, XVL 190. Gibson's clod-crusher, II 273. GIDEON, son of Joash, X. 621. GIEN, town of France, X. 621.

Giesecké on aurora borealis, IV 249. Giessen, Geiman city, X. 621—university of, XXI, 492

GIFFORD (William), X. 621—his censure of Drummond of Hawthornden, VIII. 191-his edition of Massinger's works, XIV 345-his translation of Persius compared with Drummond's, VIII 194 -Juvenal translated by, XIII 30

Gurr, in English law, X. 622-New Year's,

Gig-horse, XI. 660. Gigantohte, mineral, XV 89. Gigg, or Jig, X. 622. Giglio, island, X. 622 GIGUELA, Spanish river, X. 622. Gijon, Spanish town, X. 622; IV 156.

Gilán, Persian province, XVII 421, 423—silk produced in, 424.

GIL (San), or St Giles, town of New Gianada, X. 622.

- (Vicente), Portuguese dramatist, X. 622. GILA, river in New Mexico, X. 623; XIV.

729.

genus of fishes, XII 257. Gilbert (Davies), on the pendulum, XXL 800.

(Sir Humphrey), X. 624; XVI. 172 -his discourse on the north-west

passage, XVIII 164.

on induction in moral philosophy,

(Messrs), their dipping-needle, XIV 82.

- (Dr William), X. 623-the founder of the science of electricity, VIII. 523; I. 660—on magnetism, 570, 741, XIV. 3, 68; XX. 415.

#### GIL-GIR

GILBERTINES, religious order, X. 624. Gilbertus Anglicanus, XX. 816. Gilboa, XVII 183

Gilchrist (Alexander), his Life of Etty, IX

GILD, or Guild, X 624 See Guild. GILDAS, British historian, X. 624 Gilder and Carver, V. 755
Gilding, X 624; V 755—of porcelain.

XVIII 444—by electricity, XXI 637
GILEAD, X 627; XVII 181—balm of, IV.

GILENA, Spanish town, X. 627. Giles (St), in Edinburgh, VIII. 398. Gilgal, III. 439.

GILGIT, in Central Asia, X. 627 GILL (John), X. 627-on divinity, XXL

- a measure, X. 627; XXI 805, 808. apparatus in spinning, XX. 511 (Lough), XX. 329.

Gillespie's Hospital, in Edinburgh, VIII. 402

Gillet's chaff-cutter, II 284 GILLIES (John), historian, X. 627—on the Argonauts, III. 524

Gilliesiaceæ, nat order of plants, V 213 Gills, of fishes, II 772; XII 214—tempo-rary, of tadpoles, III 113—of mollusks, XV. 344

GILOLO, one of the Spice islands, X. 627. GILPIN (Bernard), divine, X. 628. Gilse. See Grilse

Gilsland Spa, VIL 578-waters of, XV

Gilt-head, fish, XIL 286. GIMBALS, X. 629.

Gimmerthal (B. G), his works on insects, 1X. 23

Gin, X 629, 449; IX. 760—manufacture of, VIII. 51; in Holland, XI 583—juniper berries used for flavouring, XIII 19 - in mechanics, X 629.

Ginckel (General), his Irish campaign, V 443, XII 490; XXI 840, 841 GINETA (La), Spanish town, X. 629. GINGER, in the Carnatic, X. 629 Gingely oil, XVI 495, XIII 169 Ginger, X. 629, V 211—adulterations of

ground ginger, IX. 769 - order of plants, V. 211. Gingerah, X 629.

Ginghams, places where manufactured, VII 449

Ginglymostoma, genus of fishes, XII 323 GINGUENÉ (Pierre Louis), X 629 — on Machiavelli, XIII 778, 779, 781. Ginkgo tree, XVII. 765.

GINSENG, X. 680; V. 195; III. 394; VI.

GINZO DE LIMIA (Santa Marina), Spanish town, X. 630.

Giobertite, mineral, XV 92 GIOJA (Flavio), X. 630, 470; II. 647, XIV 2; XVI 3; XX. 240 Giordani, his work on insects, IX 22. GIORDANO (Luca), painter, X. 630, XVII.

Giorgione, or Giorgio Barbarelli, X. 630; III 710; XVII 70; XXI. 290 Giorno (S), his work on insects, IX. 8 GIORNOVICHI (Giovanni Maria), musician,

X. 631. GIOTTO, X. 631; XVII. 61, 70. Giovanni de Bologna, sculptor, XIX. 863. GIOVENAZZO, town of Naples, X. 631. Giovio (Paolo) See Jovius (Paulus Gipps (Sir George), governor of New South Wales, IV. 273.

Greeks, X. 631. See Gypsies.
Graffs, X. 631, XIV. 209, 204, II 217,
XVII. 632—dentition of, XVI. 466—
fossil, XVII. 638—erectile arrangement in its tongue, III. 100. See Camelopard.

GIRALDI (Lilio Gregorio), X. 631. GIRALDUS CAMBRENSIS, X. 681; IV 475 Girard (Albert), X. 504—his discoveries in algebra, I 559, 708; II. 485-his character, I 70% -on hydrodynamics, XIL 78, 140, 146-his restoration of the lost books of Luclid, XVIII 360

- College, Philadelphia, XVII. 509.

#### GIR-GLA

Girard's lamp, XIII 171. GIRDER, X. 631; V. 749; VIL 328; XII 586 - trussed girders, 599 - bowstring griders, 602—tubular guiders, 606— building up a girder, VI 261—girder rals, XVIII 758—strength of, XX 197, 781

GIRDLE, X 631 - of Hope, order of, XIII 121. GIRGER in Upper Egypt, X. 631; VIII. 505

GIRGENTI, in Sicily, X. 632, II. 421, XX. 245, 255

GIRONDE, in France, X. 632. GIRONDISTS, X 632, 71 et seq.-their destruction, 83

GIRONS (St), in France, X 632. GIRVAN, in Ayishire, X. 632 Gisco, VI. 290, 291.

Gismondine, mineral, XV 77 Gisors, town in France, X. 632 Gisquet, Parisian police under, XVIII 188, 189

Gistl (J), his work on insects, IX. 21. Gitona, genus of insects, IX. 257 GITTITII, X. 632

GIUGLIANO, town in Naples, X. 633 GIULIANO (San), town in Sicily, X. 633 GIULIO ROMANO, painter, X. 633, XVII 69.

Grungevo, in Wallachia, X 633. GIVET, town in France, X 633 Givry, qualities of the stone of, XX. 717, 718, 759. GIVORS, town in France, X. 633

Gizeh, or El-geczeh, VIII. 499—pyramids of, III. 436; VIII. 500 Gizzard of birds, III 109—of insects, IX 51.

Glacial deposits, XV. 215.

GLACIER, X. 638—origin of, VI. 780—of the Alps, II. 625—of Norway, XVI 320, 625—not found among the Andes, III 130-of the Pyrenees, XVIII 700fluence of, on rocks, XV 139-in Biitain, during the pleistocene period, 215 -icebergs formed by, XII 196-abrading and transporting power of, XVII 603. See Moraines.

Glaciers, their action as geological agents first understood by Playfair, I. 803, n .number in Switzerland, XX, 888-Count Rumford on a curious phenomenon in those of Chamouni, XXI 231.

GLACIS, in fortification, X 640; IX. 819. GLADBACH, in Rhenish Prussia, X 640 GLADIATORS, X 640, II 730—insurrection of Roman, XIX. 322—statue of the Dying Gladiator, VIII Plate.

GLADOVA, or Kladova, in Servia, X. 641; VII 652

Gladstone (W E), as a philologist, XVII. 525

Glasher (Mr), on terrestrial radiation, XIV. 645—his hygrometrical tables, 653 -on snow-crystals, 659-annual tem-perature, 672-his thermometers, XXI.

Glammis castle, XIII. 2-Glammis sand-

stone, XX. 711.

GLAMORGANSHIRE, X 641—population and value of property, VIII 754.

GLAMOUR, X. 642.

GLANCE-COAL, X. 642; XV. 123. GLAND, X. 642, IX. 758—structure and classification of glands, II 832-lymphatic, 805 - mucous, 836-lacrymal III. 45 -salivary, 49-pincal, 54-Peyc rian, 61-prostate, 70-Cowper's, ib.mammary, 72—poison-glands of ser-pents, 113; XIX. 44—blood-glands, XVII. 660—of plants, V. 75

Glanders, disease in horses, XXL 573 GLANDFORD BRIGG, town in Lincoln, X.

Glandina, fossil mollusks, XVII. 111. Glandular cells, XVII 650. Glanibanta, Roman station, VIII. 267.

GLANVILL (Joseph), X. 642—his Scepsis Scientifica, I. 42, n. 3—his illustrations of Descartes' doctrine, 63.

Glanville (Ranulph), his work De Legibus &c. Angliæ, XX. 314.

# GLA-GLE

Glaphyra, VI. 223. Glareola, genus of birds, XVI. 808

GLARUS, or Glaris, in Switzerland, X. 643; XX 882—fossil fishes in schists of, XII. 354, 355; XVII. 640-schists of, belonging to the eocene tertiary period,

Glaserite, mineral, XV 99

GLASGOW, X. 645-alum works near, II. 637, 640—quantity of vapour in the air at, IV 183—canal to Johnstone, 333—and Ayr Railway, ib —Glasgow, Dumand Ayr Railway, ib —Glasgow, Dumand Carlola Brillian about the cotton fries, and Carlisle Railway, 1b -cotton manufactures, VII 446, 449 et seq cotton - mills, 451 - turkey-red dye-works, VIII. 292---iron manufactures of, XII 539-population of, XIII. 176; XIX 800—emboodery of muslins in, XIV. 285—projected supply of water from Loch Katrine for, XII. 141—Dr Chalmers' labours in, VI. 404-university library, XIII. 403—mortality, XV. 613—stone whalves at, XVI. 79—post-office statistics, XVIII 416—societies in, XX 368-rule for estimating horsepower in steam-engines, 602—univer-sity, XXI. 476 See Clyde

GLASLYN, in North Wales, X. 657.

Glasnevin, VIII 214.

GLASS, X. 657-achromatic glasses, II 86 —anaclastic, 743—its vast utility to science, III 198—annealing of, 218 burning glasses, VI 1; XI 275—alleged discovery of the manner of making it, IV. 643—trade of Birming ham, 732-use of brass in colouring, V. 277-cement for broken, VI. 368etching on, VIII 813-specific gravity of, XII 88-its utility and beauty, XIV 273—musical glasses, XI. 230—use of gold, in staining, X 702—transmission of heat through, I 954-ancient allusions to. XVI 521-colours of decomposed, 600-films of decomposed glass, 603-polarising structure in heated, I. 912-in egular dilatation of, 958-manufactured by the Phænicians, XX 906—glass trade of Sunderland, 808. See Barometer, Glazing, Lens, Mirror. houses, XI. 755, 756.

(Mr), his opinions concerning the primitive church, XII. 371 and n

Glass-blowers, diseases of, XIV. 448 Glass-manufactures of England, VIII. 732 -Ireland, XII 521-France, X. 256of Bohemia, IV. 310, 314-at Birmingham, 732-of Newcastle, XVI 167-Prussia, XVIII 669—glass-blower's bellows, IV 792—water - pressure blowpipe, ib.—glass-cutting, X. 673, 674—early practised at Sidon, XX. 269. See Glass.

GLASSITES, religious sect, X 675-places of worship in Scotland, XIX. 801. GLASTONBURY, in Somersetshire, X. 675 foreign cloth-makers settled at, XXL 915

GLATZ, Prussian city, X. 675. GLAUBER (John Rodolph), X. 675. Glauber-salt, XV. 97; X. 675. Glauberite, XV. 96; XVI. 658. GLAUCHAU, town of Saxony, X. 676. Glaucolite, mineral, XV. 71. GLAUCOMA, X. 676

Glaucomya, genus of mollusks, XV. 350. Glaucophane, mineral, XV. 86. Glaucopis, genus of insects, IX. 210-of birds, XVI. 768.

Glaucosoma, genus of fishes, XII. 276 GLAUCUS, X. 676—genus of mollusks, XV.

Glaukodote, mineral, XV 115. Glazier, V. 756—glazier's vice, X. 670—diamond, 671; VIII. 5—his work, in a building, V. 756.

GLAZING of earthenware, X. 676, XVIII. 442-of windows, X. 669-of gunpow-der, XI. 155-of cloth, by calendering, VI. 91.

GLEBE, X. 676. Gleditch on shoals of ants in Germany, TIT. 265.

Gleditschia, genus of trees, XVII. 763.

# GLE-GLU

GLEE, in music, X. 676 Gleet, nasal, in animals, XXI. 571 GLEIG (George), Bishop of Brechin, X. 676
—on Prof Robison, XIX. 240 GLEIM (J W. Ludwig), German poet, X

GLEIWITZ, Prussian town, X 677 GLENCOE, X. 677—massacre of, V. 443, 444; XXI. 7.

Glencorse reservoir, III 338.

GLENDALAGH, on Glendalough, X. 677; XXI. 858, 859 GLENDOWER (Owen), X. 677; VIII 687

Glenelg (Lord). See Grant (Charles).
Glengall (Lord), his evidence on salmon fishing, IX. 619 Glengariff sandstones, XV. 200

Glengarry, XIL 438 Glenmore, XII. 438; XIX. 794 Glenie (M1), on gunnery, XL 121 Glenny (M1), his description of florists' flowers, XI. 751, 752, 753.

Glenotromites, fossil echinoderms, XVII

Glenroy, XII 488. Glentilt, IV. 175; XVII. 457. GLIN, town in Limerick, X. 677

Glires, order of mammalia, XIV. 177, 135 Glisorex, teeth of, XVI 451.

GLISSON (Francis), physician, X. 677—his anatomical researches, II. 762-on the nerves, 814

GLOBE, X. 678 See Earth. Globe-animal, III 199. Globe-fishes See Diodontidæ.

Globes, artificial, X. 678-terrestrial, 485 -celestial, ib -description and use of, in geography, ib -solution of problems by, 486, 487—for the use of the blind, IV. 777

- sections of, their use in masonry, XX. 728

Globicephalus, genus of mammalia, XIV. 225

Globigerina, fossils, XVII 93 Globulariaceæ, nat order of plants, V 202.

Globules, of the blood, II. 779—quantity increased by the use of preparations of iron, XV. 39, n-of the ganglia, IL 811 Globuline, II 780

Globulodus, genus of fossil fishes, XII. 337. GLOGAU, Prussian city, X 678.

Gloma, genus of insects, IX. 285. Glomach waterfall, XIX. 426.

Glomeris, genus of myrapods, XV 748 GLOMMON, Norwegian river, X. 678; XVI.

Glories, or halos, colours of, VL 648 Glory of God, XXL 192. GLOSS, X. 678.

GLOSSARY, X, 678-of architectural terms, IIL 507

GLOSSOP, in Derbyshire, X 678. Glossophaga, genus of mammalia, XIV. 149. Glottalite, mineral, XV 77.

Glottis, in man, III. 50, 51; XVII. 679-in animals, III. 101.

Glottidium, in mollusks, XV 355. GLOUCESTER, X. 678-siege of, in 1643, V

- in Massachusetts, U. S., XIV. 341 Robert of, his rhyming Chronicle, XVIII. 120

GLOUCESTERSHIRE, X. 679-cheese, VII 625-population and value of property, VIII. 754-large oak in, XXI. 274

GLOVE, X. 682-glove trade of England, VIII. 731—of France, X. 256—in the time of Shakspeare, XX. 76—exports of, XIII. 811.

GLOVER (Richard), X. 682-his poetry, XVIII. 124. GLOW-WORM, X. 688; IX. 107; XIII 458

GLUCHOW, Russian town, X. 683. Glucina, VI. 488; XV. 65.

Glucinium, VI. 488. GLUCK (Christopher Willibald von), X. 683 -his imitative music, XV. 787.

GLUCKSTADT, town of Denmark, X. 688 GLUE, X. 684—Indian—Jeffery's marine, ib.; XX. 190—liquid, X. 684—obtained from skins, II. 834-ats use in joinery, V. 758; XII 811.

GLU-GOB

Glumellæ, in botany, V 125. Glumes of grasses, V 125 Glumiferæ, sub-class of plants, V. 215. Glutæus, a muscle, III. 92. Glutin, 11, 381,

GLUTEN (vegetable), X. 684; VIII 19, IX. 657-in bread, IV 379 Glutinous hag, fish, XII 227

Gluts, in the market, XVIII 259 GLUTTON, X. 684; XIV. 156-in Norway, XVI. 324—Lapland, XIII 235

GLYCAS (Michael), historian, X. 684 Glycera, genus of annelides, XI 299, 291. GLYCERINE, X. 684; VI 510, IL 381; XVI

Glycimeris, genus of mollusks, XV. 350-

fossil, XVII 108. Glycocine, VL 512 Glyphea, fossil lobsters, XVII 102 Glyphis, genus of fossil fishes, XII. 341. Glyphisodon, genus of fishes, XII. 265 GLYPTICS, X. 685; VIII 813 Glypticus, fossil echinoidæ, XVII 100

Glyptocephalus, genus of fossil fishes, XII Glyptocrinus, fossil echinoderms, XVII

Glyptodon, XVII 174, 639-teeth of, XVI

Glyptolepis, genus of fossil fishes, XII 336; XVII 123

Glyptosteus, genus of fossil fishes, XII.

GMELIN (Johann Friedrich), naturalist, X 685-his edition of the Systema Nature, III 183; IX. 4; portion on ormthology, XVI. 729,

- (Johann Georg), X, 686 (SAMUEL GOTTLIEB), X. 686 (Eberhard), advocate of animal magnetism, XX. 442

Gmelinite, mineral, XV 76. GMUND, town in Wurtemberg, X. 686 GMUNDEN, In Upper Austria, X. 686 Gnat, IX. 224

Gnathium, genus of insects, IX. 136 Gnathodon, genus of mollusks, XV 350 Gnata. See Egnatia

Gnawers, in zoology, XIV 177. See Rodentis.

Gness, XV. 154-soils from, II 390-its distribution in Scotland, XIX. 792-in Sutherland, XX. 841

GNESEN, Prussian town, X. 686. Gnetaceæ, nat order of plants, V. 210. Gnoma, genus of insects, IX. 145.

GNOME, X. 686. GNOMON, X. 686, 464, VII 772, 777. Gnomonics, VII 772

Gnoriste, genus of insects, IX. 228 GNOSSUS, in Crete, X 686, VII. 41

Gnostics, I. 507-meaning of the name, 1b. n .- their opinions of a hierarchy of angels, III. 311. See Gnosticism

GNOSTICISM, X. 686, IX. 421, XVII 232. GNU, X. 689; XIV. 211. GOA, X. 689-arrack of, III. 675-hbrary

at, XIII 431—weights and measures, XXI. 811

Goagnazes, V. 279, 280. GOALFARAH, town in Hindustan, X 690. Goands, in Hindustan, XL 95. GOAT, X. 690; XIV 211; IL 354—

America, 713—milk of, XV. 11—flesh, IX. 762—of India, XI. 455—of Angora, III. 166-Cashmere, VI 309; XI 455; XXI. 906—Rocky Mountain, XIV. 211; XXI. 906—Palestine, XVII 191—leather from the skins of, XIII. 305—number and distribution of, XVII. 632—Tibet,

- ISLAND, X 690; VL 135. Goatfell, VI. 27. Goatsuckers, birds, XVI. 758.

GOBELIN tapestry, X. 690—manufactory of, VI 271; X. 255; XXI. 20 Gober, province of Houssa, XI. 777. Gobi, in Central Asia, X. 690; III. 732;

XV. 495; XVIL 614. Gobiidæ, or Gobioids, family of fishes, XII. 305, 306—fossil, 344.

Gobius, genus of fishes, XII. 306-fossil, 844.

GOB-GOH

Gobies, fishes, XII. 305 Gobiesox, genus of fishes, XII. 305, 307 Goble (George), clarroyant, XX. 438his imposture detected, 439.

Goon, in Rhenish Prussia, X 690 Gobio, genus of fishes, XII. 257-

346 God, X 690-Descartes' argument for the existence of, I 59—Clarke and Newton's reasonings, 140 and n. 2, 141, VI. 757-our idea of, associated with those of infinite space, and endless duration. I 141-impossibility of finding proper language to describe the nature and attributes of, 147-three different manifestations of, 486—glory of God, meaning of the phrase, 518—Scriptures explain what he is relatively to us, not what he is absolutely in himself, ib-Epiculean doctrines respecting, III 189, n; IX. 273—views of the Athonians respecting, IV. 211, 216—of Plato, XVII 803, 806, 810, 812, 813—blasphemy against, IV 754 — being and attributes of, XIV 619, XV. 556, 557 -his nature the basis of moral rectitude, 556-his revelations of himself the criterion of moral rectitude, 557 -duty to, 570, 571 -love to, 562 -notion of, in Hegel's system, XI 283how represented in hieroglyphics, 380 -Kant on the existence of, XIII 49-Socrates on the evidence of his existence and attributes derived from final causes, XX 403-doctrine concerning, XXI. 184-concept of, ib.-existence of, 185-names, 188-attributes, 189-unity, 192-works of, 195-1everence due to, 1b

See Atheism, Theology, Trimity.
Gods, pagan, I. 457—character of, 458,
459; XIV 621—worship offered to, I. 459-were often deceased men, 513river-gods, XIX. 180 See Mythology. GODALMING, in Surrey, X 690; XX. 836 Godart, earl of Athlone, XI. 328, n 3. - (J B), his works on insects, IX.

15. GODAVERY, Indian river, X. 690, 598, 599; XL 450; XVII 647; XVIII 800

Godefroy See Gothofred.
Goderich (Lord), his brief administration,

- ın Canada, VI 138 GODFATHERS and GODMOTHERS, X. 690. GODFREY of Boullon, X. 690-raised to the throne of Jerusalem, VII 525, XII. 734, XVII 196

- murder of, V 427. GODMANCHESTER, in Huntingdon, X. 691 GODOLPHIN (Sydney), earl of Godolphin, X 691; V. 445

Godoy (Don Manuel de), X. 149; XX. 472; XIII. 11.

GODWIN (Earl), VIII. 662 (Francis), X. 691.

693

(MARY WOLLSTONECRAFT), X. 692. (WILLIAM), X. 691-his novels, XIX. 278

Godwits, birds, XVI. 803 Goedart (John), his work on insects,

IX. 3 Goes, or Ter-goes, town in Holland, X.

- (Pedro de), V. 280. GOETHE (John Wolfgang von), X. 693— his plays, VIII 167—his claims to be the discoverer of the vertebral theory

of the skull, XVI 501, 502-his friend ship with Lavater, XIII. 251, 252—poetry of, XVIII 119—novels, XIX. 293.

Goez, missionary, III 753. Goeze on entozoa, XXI. 974, 977, 978. Gog, X. 701—and Magog, ib GOGGRAH, river in Hindustan, X. 701;

XVIL 647. Gogo, seaport in Hindustan, X. 701. GOGUET (Antoine-Yves), X 701-on the origin of writing, IL 606-on castes, VI 314-on the advantages of comed

money, XV 418. Gohar, VIII. 477.

GOHUD, town in Hindustan, X. 701.

GOH-GOM

GOITRE, X. 701-common on the delta of the Oronoco, XXI. 536-in Westmoreland, 842 See Cretins

GOIZUETA, Spanish town, X. 701

Gokumite, mineral, XV 85. Golconda, X 701, VIII. 1—diamonds no

longer found at, XI 458 Gold, X. 701; XV. 66, 113—sources from which chiefly obtained, 230 — in chemistry, VI 499—its duchity, 443, 482, VIII. 229; X. 702—assaying of, III. 772—carat, VI 229—its value in the early part of last century, VII. 378 -relative proportion of silver to, 78amount coined at the royal mint, 95neconage in 1774, 79, in 1842, 81— noutine of coinage at the mint, 84 supply of, in early ages, 77, 188-effect of its increase on productive industry, 188-decrease in the supply of, 191. made up by the gold discoveries of 1848 and 1851, ib - specific gravity of, AIL. 88-gold coms of Britain, XV. 438, 439, of different countries, 441, 442—debasement of, XIV 428—its poisonous qualities, 434—distribution of, XV 231; XVII 621—preparation of, XV. 233 why more valuable than silver, XVIII 241—how used in gilding poi celain, 444 printing in, 557—cohesion of, XX 756—from Tasmania, XXI. 32 See Precious Metals, Gold-mines

- diggings in New South Wales, IV. 276, 277, in California, VI. 97, in New Zealand, XVI 235

- COAST, X. 704, II 227; XI 88,

GOLD-BEATING, X 702-shell gold-sizethread-wire, ib Gold-fish, XII. 255.

Gold-leaf, X. 702, 703, 625—in gold lace-making, XIII 145.

Gold-mines, XV. 230, 113-of America, II 705; XV. 232—Assam, 764—Australia, IV. 275, 276, 277, 278, XV. 232—Bam-bouk, IV. 408—Bohvia, 824—Brazil, V 283, 292, 298-Bogota, IV. 809-Burmah, 283, 292, 298—Bogota, IV. 809—Burman, V. 779—Bukhaia, 758—California, VI 97, 98; XV 232—Chile, VI 548, 550— Carolina, 246—Europe, IX. 387—Hindustan, XI 457—Honduias, 613—Hungary, IV 318; XII. 17-Ireland, 506-Japan, 689—Mexico, XIV. 715—Ural Mountains, XV. 231—United States, 232 -Peru, XVII 471-Russia, XIX. 542, 543—Sumatia, 804—Tibet, XXI. 247— Venezuela, 536—Virginia, 598—See

Gold, Gold-diggings, Precious Metals Gold-of-pleasure, plant, II 335—oil of, XVI 495. Gold-powder for bronzing, V 677.

GOLDAPP, in East Prussia, X. 704. GOLDAU, in Switzerland, X. 704 GOLDBERG, Prussian town, X. 704

GOLDEN FLEECE, X 704, III 524—order of the, X 704; IX. 659; XIII, 116. —— NUMBER, X 704; VI. 81, 84. Goldfinch, XVI. 761.

Goldfuss (F), his work on insects, IX 24. - (Prof), on a fossil reptile, XVII

GOLDONI (Carlo), X. 704-his comedies, VIII 148.

GOLDSMITH, X. 705.

— (OLIVER), X 705—his comedies, VIII. 166—his birthplace, XIII. 684—his poetry, XVIII 124—Vicar of Wakefield, XIX 275—his defective reading, XXI. 172.

GOLEGA, town in Portugal, X. 709. Goletta, XXI. 365

Golf, Scotch game, X 709-golf-balls manufactured at St Andrews, III. 136. GOLGOTIIA, X 709.

Goliathides, family of insects, IX. 127. Gohathus, genus of insects, IX. 127.

Golius (James), X 709-a portion of the works of Apollonius recovered by, III.

Gollnow, Prussian town, X. 709. GOLNITZ, in Hungary, X. 709. Golownin, on Japan, XII. 688, 692 et seq. Gomarus (Dr), XI. 573.

# GOM-GOO

Gomarists, III. 617; XI 573. GOMBROON, Persian seaport, X. 709; V

Gomer, descendants of, VIII 45; VI 365 GOMERA, one of the Canaries, X. 710; VI. 167

Gomez (General), XX. 480. Gomor, town in Hungary, X. 710 Gomorrah, X. 710, III 761; XVII 187 Gompertz on the value of life contingen-

cies, III 223, XII 401. Gomphocerus, genus of insects, IX 160. Gomphosus, genus of fishes, XII 267.

Gomul river, II 202 GONDAR, in Abyssinia, X 710, II 56-Bruce's residence at, V 690

Gondi. See Retz (Cardinal de) GONDOLA, X. 710-use of, in Venice, XXI 538

Gonds, XI 466 Gong, X. 710, XV 713, 709—Javanesc XII 706

Gong-metal, VI 497, 586 GONGORA Y ARGOTE (Luis de), X. 710his poetry, XVIII 115.

Gonia, genus of insects, IX. 248 Goniatites, fossil mollusks, XVII 112. Gonidia, in lichens, V 146

Goniodontide, family of fishes, XII 263 Goniognathus, genus of fossil fishes, XII

GONIOMETER, X. 710; XV. 50, I. 972. Goniometry, the name under which Euler's arithmetic of series is cultivated ın Germany, I 713

Goniopholis, fossil reptiles, XVII. 152 Gonnern (F Von), mesmerist, XX 438 GONONG APEE, X. 710, IV 409. Gonoplax angulata, VII. 541.

Gonothynchidæ, family of fishes, XII.

Gonorhynchus, genus of fishes, XII 255 Gonostoma, genus of fishes, XII 247. Gonsalvo (Ludovico), his memons of Loyola, XII 749.

Gontian, X 4. Gonzago, Bizzilian poet, V. 298. Gonzalvo, voyage of, IV. 262 Good, XV. 557; XX. 398—the chief, or

summum bonum, III. 560, XV. 573. - Friday, X. 710; I 502

HOPE (CAPE OF), X 711; II. 227-first doubled by Vasco da Gama, 393 XX. 124-observatory at, III 818, IV. 90 —ant-hills at, III. 263—insurance offices ın, XII. 413—disturbances at, ın 1825, V. 641 -astronomical observations at III 118; V 60, I 862-discovery of, VIL 188, X. 393-taken by the British, 104-variation of the needle at, XIV 52-height of waves off, XVII 582—plants of, V. 222, 228, 229—heat of the sun at, XIV 637; of the sun at of the soil, 644-formation of clouds at, 655—fall of 1ain, 658—wines of, XXI. 887, 889—weights and measures, 810 wool from, 913.

- (John Mason), on the origin of the name of Macaionic poetry, VIII 249, n 3—on the African rat, XVI 449 -his life of Dr Geddes, X 445.

Goodeniaceæ, nat order of plants, V. 197. Goodfellow (B), his steam-engine machinery, XX 605, 606—his engines, 610 flue-boilers, 617

Goodlake (Thomas), on the greyhound, XI. 772.

Goodwin Sands, X. 716; XIII 65

(Mr), Greco-Egyptian work on magic, edited by, VIII. 443, n. 1.

(Mr), his manufacture of sal-ammoniac, II, 721

- (Mr), on the diseases of the horse XI. 664.

Googe (Barnaby), his work on husbandry, II. 256.

GOOLE, in Yorkshire, X. 716. GOOMSUR, town in Hindustan, X. 716. GOOMTY, river of Hindustan, X. 716; XVII 15. Goor, XX 798, 796.

GOORGAON, town in Hindustan, X. 716.

# G00-G0S

Goosander, bild, XVI. 819. Goose, X 716, XVI. 816—great numbers of geese in Mecklenburg, XIV. 419—its flesh, IX 762—grease, XVI 493—quills from, XVII 399—goose-liver pies, XX.

Goose-Skin, in anatomy, II. 834 GOOSEBERRY, X. 716; V 194—culture of, XI 718—fruit of, V. 188—as food, IX

order of plants, V. 194 Goosefoot order of plants, V 203. Gopher wood, III 608 GOPPINGEN, in Wurtemberg, X 716. GORCAH, X. 717 See Ghoolcah GORCUM, town in Holland, X 717 GORDIAN KNOT, X. 717; XIII. 767 GORDIANUS (M. A. Africanus), Roman emperor, X. 717, XIX 348

-(M Antonius), Pius, Roman emperor, X. 717; XIX 348
GORDIUM, in Asia Minor, X. 717; XIII

Gordius, genus of annelides, XI. 302, 307

Gordon (Robert, Rev. D1), X 717. - (THOMAS), X 717-his translation

of Tacitus, XXI 5 - (Adam), VI. 606

(Col. Hon. A.), on artillery, III

(Dr John), his system of anatomy, II. 767-on the veins, 794-on the lyinpliatics, 804, 805-on lymphatic glands, 805—on the nerves, 806—on the skin, 834—his opposition to Spurzheim's views, XX. 519.

- (Loid George), his riots, V. 491 (Prof), of Erfurt, on electricity, VIII 526

(Mr), on the Greek revolution, XI. 27, 29, 31.

Gordon's Hospital, Aberdeen, II 30 Gore, in heraldry, X 717.

(G), his experiments in voltaic electricity, XXI 631

—— (Mis), her novels, XIX 283 Gorer, island, X. 717—trade of, XX. 49

geology, 50
Goley, in Wexford, XXI. 846, 847.
Gorfons, birds, XVI 811
Gorgu, m architecture, X. 717. - in fortification, X. 717.

GORGED, in heraldry, X 717. Gorgel, dictator of Hungary, XII. 24, 25—his attack on Buda, XVII 480.

GORGET, X. 717. Gorgias of Leontini, IV 205 Gorgonidæ, polypcs, XXI 1004. Gorgons, in mythology, X. 717.

Gorham case, XI 351 Goring (Dr), on microscopes, XIV. 763 et seq -his solar camera microscope, 791, 792—on the illumination of microscopic

objects, 796, 799-on test-objects, 802. GORITZ, in Illyria, X. 718. GORLITZ, Prussian town, X. 718.

Goro, XVII. 241. Gorresio (G), his translation of the Ramayana, XVII 529.

Goise, II 329—suitable forage for milch cows, VII. 632; XIII 86—covers of, XII 37—as a hcdge, XVII. 760—as a protection to young trees, XXL 273

Gort, town in Galway, X 718. GORTHO, modern name of Cornth, X. 718, VII. 367, 368.

Gorton locomotive station, XVIII. 775. Gortschakoff (Prince), XIX 500. GORTYNA, in Crete, X. 718—coins of, XVI.

GORUCKPORE, town in Hindustan, X, 718 Gory (L.), his works on insects, IX. 18. Goshawk, XI. 248.

Goshen, in Egypt, X 718; XVIII. 819. Goski (J. B), his work on insects, IX. 23. Goslar, town in Hanover, X. 718. Goslarite, mineral, XV. 98. Gospatric, XIX. 747.

GOSPEL X 718-introduction of I. 480though springing out of the Mosaic, is in itself a new religion, 481—points which distinguish it from the Mosaic dispensation, ib.—contrast between the

#### GOS-GOU

two, 1b, 482-sacraments under, 482worship, 481—its spirituality, ib—nni-veisality, 484—unity, 486—supplies principles to regulate the conduct, but no precise code of laws, 484-admits all to an equality of privileges, 486, 489chief causes of opposition to, 506 Bible, Apocrypha

Gosport, in Hampshue, X 718, XVIII 379—aurora borealis seen at, IV. 243. GOSSAMER, X 718.

Gossan, mineral, XV 222.

Gosse (P H), his opinions regarding fos-sils, XVII 124—his arrangement of the actinoida, XXI 1004, n 2

Gosselm (M), on the Periplus of Hanno, II 219; X. 461-on a supposed error of Ptolemy, 467-on geography, 465, 467,

Gossip, X. 718.

Gossypium, cotton plant, V 184, VII 425 Gotaland, or Gothland, division of Sweden,

GOTAMA BUDDIIA, X. 719; VI 397. GOTHA, IN Germany, X. 725, 593; XIX. 681—libiary at, XIII 433—river and canal in Sweden, X. 725;

XXI 832

GOTHAM, in Nottinghamshire, X. 725; XVI 340.

GOTHARD (St), X. 725, II. 623, XX. 887; XXI 495.

Gotherte, mineral, XV 108 GOTHENBURG, in Sweden, X. 725, 729, XX 864

Gothic aichitecture, III. 445, 449, 456, 479, 517-more scientific than Grecian or Roman, 402—arches, 409—spires, 410—roof, XIX 373—Wien not successful in, XXI. 936

-LANGUAGE, X 725; IX 392, XVII 531, 539—alphabet, II 615—Bibles, IV 701; XIX 840—its structure derived from that of the Greek, XIII 210-Loid's prayer in, X 729—1ace in Europe, IX. 388. See Goths—school, in Swedish literature, XIX.

700.

GOTHOFRED (Denis), X. 726.

(James), his edition of, and com-mentary on, the Theodosian code, VI 741, 744,

GOTHS, X. 726, V 374; IX. 388; VI 364 -agriculture under the, II 251-de-feated by Constantine, VII 302-their wais with the Romans, 309 et seq .their conquest of Rome, X 577; XIX. 363, of Italy, XII. 640—state of Italian art under them, XVII. 60—their kingdom in Spain, XX. 459, 460—their invasions of the Roman empire, XIX. 348 et seq. See Gothic

GOTTENBURG, X. 729. See Gothenburg. GOTTINGEN, in Hanover, X. 729-library of, XIII 420-magnetic conference at, XIV. 18-magnetical observations at, I 994—university of, XXI 492.

GOTTLAND, island in the Baltic, X 729 Gottsched, XIX. 717. Gouda, town in Holland, X. 730. Goudon, three-stringed violin, X. 730. Gongane Baria, lake, VII 371.

Gough (Lord), his defeat of the Mahiattas, V 669; XI 168; of the Sikhs, V. 670; XVIII. 693—his victory at Gujerat, XI 91—engagement at Chillianwalla, VI 554; XVIII. 693.

Goujon, sculptor, XIX. 865. Goulard's extract, IX. 457.

Goulburn (Mr), his act for the suppression of the Catholic Association in Ireland.

Gould (Dr), of Boston, on the preservation of foot-prints, XVII 130

- (John), his works on birds, XVI 732, 824, n. 828 (Mr), on ants, III. 261, 264

Gould's steam apparatus for ventilation, XXI 541 Goura, bird, XVI. 194.

Gourd, V 193—culture of, XI. 736.

order of plants, V. 192. Gourdon, in France, X. 730.

#### GOU-GRA

Gournay (Jean-Claude-Maria Vincent de), VIII 374-on political economy, XVIII 220.

GOUROCK, X. 730.

Goury (Mr Jules), his illustration of Moorish remains in Granada, III 503. Gousty, ancient harp, X. 730

GOUT, X. 730-Barthez on, IV 481.

Govea (Andrew), V. 715, 716. GOVERNMENT, X. 731—modern improvements in, I 24—Aristotle on, III 566 governments of Asia, 750, Athens, IV 213; Australia, 283; England, VIII 756, ancient Egypt, 440, Denmark, VII. 749; France, X. 277; Greece, XI 18; of the United States, XXI 428; feebleness of existing, 437--(see other countries)-Buchanan's works on, V 718—passive obedience, 719—always spends what it is able to extract from the people, VII 140-tendency of colomal possessions to produce or prolong misrule, 146-evils of an undue expenditure by, 199—cases in which levolt against is justifiable, I 544-manufacturing by, XIV 290—as a basis of law, XIII 256—offences of the press with respect to, 364—Paley on, XVII 200 - Plato on, 810 See Aristocracy, Democracy, Economists, Monarchy, &c

areny, according to the control of t

or Gwyr, peninsula, X. 740. Gowhatty, III 763, 764 Gowland (Mr), his escapement, VII 13 Gowne, Carse of, VI 276 See Carse. Gowne's conspiracy in Scotland, XIX 789 —Lord Hailes' work on, VII 635. Goyanna, town in Brazil, X. 740 Goyaz, town in Brazil, X. 740.

Goyeneche (General), IV. 832 Gorr, river in Deibyshile, X. 740. Gozo, island, X 740; XIV 116. Gozzi, (Gasparo and Cailo,) X 740, 741 Graaf (Regnier de), his anatomical 1e-

searches, II 762. Graah (Captain), his researches in Giecu-land, XI. 39, 41.

GRABE (John Ernest), X. 741. GRABOW, IN Germany, X. 741.

GRABOW, IN Germany, X. 741.

GRACOHUS (Cauus), X. 741, XIX 318—

Catthage rebuilt by, VI. 303.

— (Sempronlus), VI. 297.

— (Thborius), X. 741; XIX. 318.

GRACE, days of, X. 741; IX. 428.

— this VXI. 391.

title, XXI. 291.

in theology, controversy of Malebranche regarding, I. 74—Warburton on the doctaine of, XXL 835—means of,

use of the word in the University of Cambridge, XXI, 462.

GRACES, in mythology, X. 741. - the covenant of Charles I. with the Irish, XII 480.

Gracias, in Honduras, XI. 613 GRACIOSA, one of the Azores, X. 741; IV.

- one of the Cananies, VI. 167 Grackle, bald, XVI. 754-bare-necked, 751 —paradise, 754—piping, 748. Gracula, genus of birds, XVI. 754. Gradients of railways, XVIII. 759, 794,

795-their influence on speed, 793, Gradino, in architecture, III. 510 GRADISKA, Turkish town, X. 741; XXI

371. GRADUATION, of mathematical instruments. X. 741-of hygrometers, XII. 186-of

thermometers, XXI 223, 224. in the arts, X 742.

Giæco-Roman theory on the site of Troy. XXI. 358.

Græcus (Magnus), his claims to the invention of gunpowder, XI. 150. Grævius (John George), X. 742; V. 786.

GRAFTING, X. 743—by approach, II. 41—propagation by, XI. 694, 703; V. 167,

#### GRA-GRA

XVII. 767 - propagation of fruit-trees

Grafton (Mr), on the deposit in gas retorts, X 414.

- (Richard), printer, XVIII. 537. GRAHAM (George), X. 743—his optical instruments, III. 808—inventor of the mercurial compensation pendulum, VII 7; and of the horizontal escapement, -his discovery of the daily variation of the needle, XIV 4—on the length of the pendulum, XXL 799.

- (JAMES), marquis of Montrose, X. See Montrose

- (Sir James), letters opened at the

post-office by, XVIII. 412. - (John), of Claverhouse, Viscount Dundee, X. 743—his military transactions in Scotland, V 438—his advice to James II, 430-his proceedings in Scotland in favour of James II., 440-slain

at Killiecrankie, 441.
—— (Prof.), his analysis of gunpowder, XI. 156—his chemical investigations, VI. 460—his law of the diffusion of

gases, L 935.

- (Sir Robert), XIX 758 (THOMAS), Lord Lynedoch, X. 743; V. 608.

Graham's Dike, III. 281.

- Island, temporary appearance of, XXL 607.

- Town, X. 744, 714.

GRAHAME (James), author of The Sabbath, X. 743

Graian Alps, II. 623 Grain coast, II 227; XI 89

- crops, II. 306—harvesting of, 313when fit for reaping, 314-stacking of, ib -comparative productiveness of dufferent countries in, XVIII 338 — in Scotland, XIX. 796, 797; Ireland, XII. 514, 515 et seq.

- Isle of, proposed dockyard at, VIII.

weight, X. 744.

GRAINGER (James), X. 744

— (Richard), his improvement of Newcastle, XVI 169

GRAINS OF PARADISE, X. 744 - of gunpowder, XI 156.

Grallaria, genus of birds, XVI. 753. Grallatores, order of birds, XVI. 794; XVII. 634.

Giallina, genus of birds, XVI. 752 Grammeze, nat. order of plants, V. 215. Graminivorous animals, season of partura-

tion of, III. 182. Grammalogue, XX 676, 678.

GRAMMAR, X. 744-Universal ib -Bacon's profound reflections on, L 34-of the ancient Egyptian language, XI 412-Greek, Latin, and Hebrew grammars. XVII. 526—characters of abbreviations in, VI 419-Sanscrit, XVII. 527, 529 Horne Tooke on, XXI 307.

Grammatite, mineral, XV. 80 Gramme. French measure of weight, X.

Grammistes, genus of fishes, XIL 275.

GRAMMONT, town of Belgium, X. 793. - bucaneer, V 712.

(COUNT), X. 793; XI 199. lace, XIII 143.

Grammysia, fossil mollusks, XVII. 105,

GRAMPIANS, X. 793; XIX. 793-geology of, XVII 456

Grampound, disfranchisement of, V. 632. GRAMPUS, X. 793; XIV. 226-dentition of XVI 445.

GRAN, Hungarian city, X. 798.

GRAN CANARIA, X. 793; VI 166. GRANADA, in Spain, X. 793—Moorish remains in, III 503—the Alhambra at, II. 577-Moorish kingdom of, XX. 461, 463, 465-university of, XXI. 492.

(New), in South America, X. 795 —Bolivar's campaign in, IV. 818—metallic produce of, XV 248.

- town of Central America, X. 798. (FRAY LUIS DE), friar, X. 798 Granadilla, a fruit, V. 193.

# GRA-GRA

GRANARD, town in Longford, X. 798. GRANARY, X. 798. GRAND CANAL, in Iteland, X. 799, XIII 83, 92, 93

Duchies, in Europe, IX. 397.

Island, in Niagara river, X. 799 RAPIDS, town in Michigan, X. 799

RIVER, in Michigan, X.799 SERJEANTRY, ancient tenure, X.

Trunk Canal, V 368, XX 530 Grande-terre, in Guadaloupe, XL 72

(Rio), XIX. 175.
GRANDEE, X. 799
Grandi (Abate), on the origin of modern copies of the Pandects, VI 747 Grandipalpi, insects, IX. 96

GRANDOLLA, town in Portugal, X. 799 GRANGE, X. 799 - (Bouillon la), on the saltness of the

Mediterranean, XIV 470 —— (La) See Lagrange. Grangemouth, in Stilling, X. 799; XX.

GRANGER (James), biographer, X. 799 GRANICUS, river in Asia Minor, X. 800-battle of, XIII 766. Granilla, VII. 50

GRANITE, X. 800; XV 136, 183-classification of granitic rocks, 155, position and form of, 184-age and consolidation of, 186—joints in, 164—veins, 186—decomposition of, II. 390—soils from, 390—specific gravity of, XII. 88—gra-phic granite, IV 413—of Aberdeenshire, II 33; Argyleshire, III 526; Banffshire, IV 412; Egypt, III, 438; of Peterhead, XVII, 484—formations of, 587-as a building-stone, 619, XX. 711-granite works in Aberdeen, II. 31 - facility with which it was wrought by the Egyptians, XX 710—causes of its decay, 712—its resistance to crush-

ing, 718. GRANJA (La), de Torrehermosa, Spanish town, X. 800, 212

GRANOLLERS, Spanish town, X. 800. Grant (Charles), Lord Glenelg, his cornbill, V. 651—his resolutions respecting the corn trade, VII 382—his India bill of 1833, XI 528—his rules for intercourse with the Kafirs, XIII 34

(Sir Thomas), distilled water for steamships introduced by, XX. 24. - (Mr), his life-preserver, in ship-

wreck, XIII, 439 (Madame), XXI 12 and n (Prof.), on zoophytes, XXI 990, n

6, 999, 1000, 1008. GRANTHAM, town in Lincolnshire, X. 800;

XIII 492 Granton Pier, IX. 795.

GRANULATION of metals, X. 800-of gunpowder, XI. 155.

Granulite, rock, XV 137. Granvelt, bishop of Arras, XI 563. GRANVILLE, French seaport, XL 1.

GRAO, Spanish scaport, XI. 1. GRAPE, XI 1: IX. 759—of New South Wales, IV. 280-in Egypt, VIII. 431. See Wine-making

- vine, V 187--culture and varieties of, XI 707, 758—of the United States, XXI 425, 888—dwarf vine of the

Ionian Islands, XII. 445.
— dusease, X. 246, n., 247; XXI. 885, 887—in the Canaries, VI 164. See Oidium.

in veterinary science, XXI 579. GRAPE-SHOT, XI. 1, 142 Grape-sugar, II. 380, V 320; VIII. 47,

TX. 756. Graphipterus, genus of insects, IX. 59. Graphite, XI. 1; VI. 471; XV. 128. Graphometer, XI 1.

GRAPNEL, or Graphing, XL 1; III 118. Graptolepis, genus of fossil fishes, XII. 335; XVII. 125.

Graptolitidæ, fossils, XVII. 95. Graptolites, XVII. 95

Grasmere, village and lake in Westmoreland, XI. 1; XXI. 842, 843. Grass, XI 1, V. 215—culture of grasses,

# GRA-GRA

II 322-kinds best adapted for watermeadows, XII 613—grasses peculiar to Cape Verde Islands, XXI 544

Grass lands, produce of, in England, VIII

 walks, XI. 747. GRASSE (La), French town, XI. 1 - (Count de), defeated by Rodney,

V 500—his hospitable treatment in England, 501, n Grasser (Jacob), VII. 730 Grasshoppers, XI 1, IX 160—their

cohabitation with ants, III 264 Grassias, XI. 91, 92, 466, XIV 120.

Grassner (F), his works on insects, IX.

Grateloupia, fossil mollusks, XVII 108 Grates, for furnaces, X. 354-for house XIX. 614—prevention of smoke in, XX. 353-cause of the different feeling produced by the heat of a stove and a grate,

GRATIANUS (Augustus), XI 1, VII 310 —— Benedictine monit, XI 2—his

Decretum, VI 189, XXI. 449

Grating, in furnaces, X 354

Gratius (Faliscus), Roman poet, XI 2;

XII 32.

GRATTAN (Henry), XI 2; XII 496-his motion on the incapacity of George III, V 533—his opposition to the union of Ireland with Britain, 572—his motions for Catholic emancipation, 624, 625

GRATZ, in Austria, XI. 4-university of, XXI. 492

Grauculus, genus of birds, XVI. 748. GRAUDENS, Prussian town, XI 4. GRAUNT (John), XI 4; XII 394, 396—on

pied by, XIX. 620-time that should elapse before graves be reopened, 620.

Gravel (urnary)—Magendie's theory of,
VIII 24—in the domestic animals, XXI. 570-surgical treatment of, XX. 830. See Calculus, Lithotomy. - used in masonry, XX. 711.

Gravel-walks, XI 747 GRAVELINES, French town, XI 5 Gravenhorst (J L. C.), his entomological works. IX 13

Graver, VIII 802, 803

Graves (The), wines of, XXI 883. Gravesande (William Jacob), XI. 5—his air-pump, XVIII. 36. Gravesend, town in Kent, XL 5—popula-

tion, XIII 67

Gravesende (Mr), on the resistance of fluids, XII. 159. GRAVINA (Giovanni Vincenzo), XI. 5.

- city of Naples, XI. 6.

Graving-dock, VIII 76
GRAVITATION, XI. 6—Newton's discovery
of, I 670; IV. 220; III. 803; XVI. 206-the cause of acceleration of falling bodies, II. 72-its action in the plane-tary system. III 809: IV 97-Hooke

on, 220; I. 675. See Dynamics, Gravity
theory of the motion of glaciers, X 637

Gravity (centre of). See Centre of Gravity.

escapements, VII. 11. numbered among the virtues by the Italians, II 741

(SPECIFIC), XI 6, XII. 84-tables of. 88

GRAY, French town, XI. 6.

(Dr J. E.), his zoological catalogues of the British Museum, XII, 328; IX. 19-on the chitonidæ, XV. 379-on the genus crepidula, 381—his catalogues of the mollusca, 327—his arrangement of the lampreys, XII. 229—on polypes, XXI. 1003, 1004.

- (G. R.), his entomological writings, IX. 19-his works on birds, XVI. 828. —— (John), his improvement of steam-engine valves, XX 585, 586

(Lady Jane). See Grey - (M. le), on photography, XVII 549

# GRA-GRE

Gray (Mr), on zoophytes, XXI 987, 992. (Mrs), her work on the mollusca, XV. 327.

(Mrs Hamilton), on Etrurian cities and buildings, IX. 361, III. 499, n.

(Stephen), on electricity, I. 660, 733; VIII 524, 565—on the microscope, XIV. 768, 775.

(THOMAS), poet, XI 7-his estimate of the merits of Rousseau's Emile, I. 184—fond of alliteration, II 593—poetry of, XVIII. 125

colour, dyeing of, VIII. 313—va-neties of, XV. 59 Gray's Inn, XII 384; XIII. 672 Grayling, XII 244—its flesh, IX 763—

angling for, III 158, 149, n GRAYWACKE, XI 8. See Greywacke

GRAZALEMA, Spanish town, XI 8 Grazing, IL 324-of cattle and sheep, 325.

– farms, in Jamaica, XII 680 Grease, a disease in horses, XXI 579 Great, various meanings of the word. VIII 9

- Salt Lake, XI. 8; XXI. 498—city of the XIX, 588.

- Western Railway, telegraphs on, XXI. 112

Greathead (Henry), his lifeboat, XIII 445. Greathed (Col), XVI 312.

Greatprimer type, XXI 401 GREAVES, armour, XI 8

— (JOHN), XI 8—on Roman money, XV 433

Grebes, birds, XVI 809.

GREECE, XI 9; IX. 403—history of, XI. 543 - works on the architectural remains of, III. 456-Greek structures, 460, 461-were the Roman laws of the twelve tables derived from? VI 738, 739, 740—Persian invasion of, IV 198 -agriculture of, II. 249-commerce of, VII. 185-mines, 188-coins, 67-civilisation and colonisation of, from Egypt, VIII. 459, XVII 787 - emigration from, 650—medicine in, XIV 451, 452, origin of classic philology in, XVIL 518, during the decline of the Roman empire, 520—height of mountains in, 642, 643—old sceptical school of, XIX 706, new, 707—sucude in, XX. 799—ancient wines of, XXI 882, See Chronological Table, VI. 677 et seq. -also Greeks, Attıca, Athens, &c.

- (modern), hives of, III. 296duct of France towards, in 1827, X 194—revolutions in, XI. 22, 31—mis-sions established in, XV. 271—historical writers, XI 519-weights and measures. XXI 511-woollen manufactures of, 913-university in, 492-map of, XI. Plate.

Greek architecture, III 440, 460, 466 et seq — remains of, 456, 400 et seq — partly borrowed from Asia, 400—its introduction and progress in Britain, 456—Doric, 463—Ionic, 465—Corinthian, 466 mouldings and ornaments of, 467 — beauty of, IV. 549—baths, 505—theatres, III. 442—temples, 461—supposed knowledge of the arch by the Greeks, 401abacus, II. 5.

CHURCH, XI. 33; VI. 713—mysticism in, XV. 755—extent of its domimon in Europe, IX. 394-ordination in, XVI. 703—in Ionian islands, XII. 446—funeral rites of, X. 344—its claim to the guardianship of the holy places, XIX. 500 - in Russia, 526, 527 - in Syria, XX. 908

influence in Rome, XIX. 313-introduced and publicly taught in England, VIII 796-no indefinite article, X. 751 moods and tenses, 765, 766 n., 769ablative case, II 42—accents, 75—study of, at Oxford, XXI. 457—bibles, IV. 698; XIX. 889—editions of the classics, 710 - Erasmus and Sir Thomas Smith on its pronunciation, IX. 222modern languages of Greece, XI. 22.

#### GRE-GRE

Greeks (ancient), their acclamations, II 78-abortion among, 44-adoption, 149 -punishment of adultery, 166-algebra unknown to the early Greeks, 482their manner of writing, 611-alphabet, 612—knowledge of anatomy, 748 et seq —religion, IV 216—their perfection in —religion, IV 216—their perfection in the fine arts, III. 706—statues, 707-709—theatres, 442, 463; VIII. 135—commerce in the Black Sea, IV. 745—numerals, III 575, VII. 419—mode of calculation, II. 5, III. 577—army, 624—astronomy, 787—their care to present the latest and forms IV. 260 serve the balance of power, IV 389—baths, 505—bells, 628—beards, 527 may have derived many of their metaphysical speculations from India, V. 271 - their beer, 318 - brickmaking among the, 342-burnals, 774-burning of the dead, 795-their knowledge of burning-glasses, VI 3-calendar, 76, 79, 665—camps, 122—caps, 205—their knowledge of anæsthetics, 632—cock-fighting, VII 50—colomes, 135—danc-ing, 645—dials, 773—divorces, VIII 67 drama, 134\*, 136, 138—their skill in drawing, 170—dyeing, 273—their con-nection with Egypt, 458; and rule there, 467-influence of local circumstances on their character and government, XI 11, 12—exposing of children by, IX. 457 festivals, 494-funeral rites, X. 343gnomon supposed to be invented by, 464—geometers, 497—gymnasia and gymnastic exercises, XI. 168—their games, X 397-racing, ib -horsemanship, XI 672, 673—historical writers, 548—hymns, XII. 188—their rates of interest, 426—law, XIII. 257—libianes, 382-school of painting, XVII 46, 49, 81, 82-poetry, XVIII 98-monarchy, XV 412—mourning, 667—mysteries, 753—mythology, 766, IV 216—education, XV 807—coins, XVI 851, 853, 354, 356, 360, VII 67; XV 433 and n 1—oaths, XVI 398—pantheism, XVII 231—vases, XVIII 431—primogeniture among, 515 - sculpture, XIX 850 et seq—sanitary measures, 602—shipping, XX. 117—shoes, 208 slavery, 319—surgery, 809—masonry, 710—uses to which their theaties were 

sieges of Athens by, IV 174-their war with the Turks, V. 651: XI. 30, VIII 494—Lord Byron's aid to, VI 40, XI 28—language, 22—monarchy, XV. 413. Sec Greece (modern)

GREEN BAY, XI 37; XXI 893

colour, XI 37; VI. 644—varieties of, XV. 59—of plants, XVI. 698—dyeng, VIII 309, 319—for printing, XVIII 556.

- MOUNTAINS, XL 38; XV. 522; XXL 550.

Green (Mr), on the mathematical theory of electricity, VIII 533, L 989—his modification of Fresnel's theory of reflection, 920 and n. 6.

park, London, XIIL 668 river, XIII 69

teas, XXI. 86-artificial colouring of. 87.

Green's fuel economiser, XX 604, 605.

hydrogen lamp, VIII. 626.

GREEN-CLOTH, Board of, XI 37, 374, 774.

Green-earth, XV 83.

Green heart, timber, V. 204; XXL 277not hable to injury from marine worms,

GREEN-HOUSE, XI. 38, 755-greenhouse plants, 756.

GREENCASTLE, XI. 37

XI. 225

in Down, VIII. 124.
GREENE (Robert), XI. 37—on Shakspeare, XX. 84.

Greener (William), on fowling-pieces XX. 213, 217.

GREENLAND, XI. 38—early Norwegian settlements in, II. 698—extent of, 667-depression of the coast of, XV.

# GRE-GRE

167-height of mountains, XVII 645whale, XIV. 233-missions established in, XV. 271 - discovered by the Icelanders, XII 198-voyages to, XVIII. 162 et seq

GREENOCK, Scotch town, XI 44; XIX. 9. Greenockite, VI 51, 492, XV. 121. Greenovite, XV 110

Greensand, XV. 210-in Scotland, XIX.

Greenshank, bird, XVI 805.

Greenstone, XV. 135-ash, 136-its columnar structure, 166-relations between it and felstone, 189-beds of, in aqueous rocks, 187-its absorbent power, VII 108, XI 271.

GREENWICH, town in Kent, XI 47-population, XIIL 67-naval asylum at, XVI.

-Hospital, XL 48; XIIL 68; XVI. 119; XXI. 936 - foundation of, XIII -roof of its chapel, VI 266—schools of, XVI. 120-pensioned officers on, ib Observatory, III 816, XI 47— transit circle at, I 850—mural circles and transit instrument, IV. 153-Brad-ley's improvements in, V 264-Maskelyne's observations and improvements at, I. 833, 835-Pond's improvements, 849 -meteorological observations at XIV 672, 675, 686 - Arry's improvements, I 850

catalogue of stars, IV. 95 GREET, river, XL 49

Gregarina, zoophytes, XXL 980. GREGORIAN CALENDAR, XL 49; VI. 78, 85-89, 668

- reflecting telescope, XVI. 533, XXI. 126.

Gregorius, Roman lawyer, VI. 742

negorius, riomani lawyer, VI. 742

op Mazianzum, XI 51, XV. 407.

IX. (Pope), his Decretalium Compilatio, VI 189—inquisition confirmed by, XII 387

Grigory the Great, XI 49—on the decay of the city of Rome, XIX 364 ———II., bishop of Rome, XIII 640, 641

VII (Pope), XL 50; XIL 644papal dominion under, VI. 188

XIII. (Pope), his reform of the

calendar, VI 78, 82

(David), XI. 53

(Dr David), professor of astronomy at Oxford, XI 53; I 697. —— (Duncan), I. 807 n. 2.

(James), mathematician, XL 53his Optica Promota, I 629; II 88—lus reflecting telescope, 88; I. 748—his discovery of an algebraic series, 559his burning mirror, VI. 11-his attack on George Sinclair, IV. 462, n .-- on optics, XVI 532-on the quadrature of the circle, XX. 522, 523.

— (Dr JAMES), XI. 55—on the moods of verbs, X. 762, 768-770, n.

—— (Dr John), XI 53—his connection with Dr Cullen, VII. 574—his lectures on the Duties and Qualifications of a Physician, L 224-on the union between mind and body, ib -Smellie's Life of, XX. 337

(Mr), of Lisbon, his slide-valve

for locomotives, XX 615.

name of a Scottash family, XL 53 of Nyssa, XL 52-on Balaam, IV. 382—his Oratio Catechetica, XXI. 183. - of St Vincent, on the quadrature

of the circle, XX. 523.

of Tours, XL 52, 548. (OLINTHUS), LL D., XI. 57 — his notices of Robert Hall, 190 et seq.

- THAUMATURGUS, XI 52. (Dr William), his letters on animal magnetism, XX. 436, 441, his translation of Reichenbach's work on that subject, 434.

GREIFFENBERG, in Pomerania, XL 57. GREIFFENHAGEN, town in Pomerania, XI

GREIFSWALD, town in Pomerania, XI. 57
—university of, XVIII. 673; XXI. 492 GREIZ, German town, XI. 57 Grellman on the gypsies, XI. 170.

#### GRE-GRI

GRENADA, or Granada, island, XI 57sugar-ants of, III. 261, 263; mode of destroying them, 266-naval engagement between the British and French at, V. 484.

- New See Granada, New GRENADE, XI. 58 GRENADIER, XI 58—guards, 74. Grenadines, islands, XI 58 Grenelle, Artesian well of, XV. 184 Grenfell on the national debt, X 334 Grengesite, mineral, XV 78

Grenie (M), his improvements on the organ, XVI. 712.

GRENORLE, in France, XI, 58, XII 627—glove trade of, X 256—insurrection at, 176—population, 277.
Grenville (George), MJ. 59—prime minis-

ter, V 467

- (LORD), XI 58. See Wyndham, Right Hon. William

(RICHARD), Earl Temple, XI. 58; V.468—his opposition to the peace with France in 1801, 586.

- (Hon. Thomas), his bequest to the library of the British Museum, XIII

GRESHAM (Sir Thomas), XI 59. - College, XI 60; IV 452, XIII.

667 GRLSSET (J B Louis), XI 60; XVIII.

117 Greswell, on the dates of St Paul's epistles, XVII 350.

GRETA, rivers in Cumberland, XI 60; and

GRETA, INVES IN CHARGE AND A STATE OF THE STATE OF T

GREVILLE (Fulke), Lord Brooke, English poet, XI 61

- (Right Hon. Charles), his account of corundum, VII. 420.

Grevius. See Grævius GREW (Nehemiah), XI. 61; XIV. 461comparative anatomy, II. 763—on the sexual organs of plants, V 152

Grey colour, dyeing of, VIII 313ties of, XV. 59

- (Dr), his Memoria Technica, XV

(EARL), XI 61—promoter of the association, "Friends of the People," V. 542—on the balance of power, IV 392, n. 2-his motions for parliamentary reform, V. 542, 549-his motion in 1795 for negotiations with Fiance, 555 -his opposition to the union with Ireland, 572-motion in 1801 for inquiry into the state of the nation, 577-refusal to join the ministry in 1812, 612 his administration, 660-his resignation of office and recal, 663—his coercion bill for Iteland, ib-his resignation in 1834, 664.

— (George), papyrus brought from Egypt by, II 607.

(George A.), on paring and burn-ing moorlands, II. 359

—— (Sir George), on the mountains of New Zealand, XVI. 232—his policy in Kafraria, XIII. 35

— (Lady JANE), XI. 63; III. 723, VII. 484; VIII. 707-709

—— (Major-General), his defeat of the Mahrattas in 1843, V. 669, XI. 168. - (W. H.), his report on savings banks, XIX. 664. GREYHOUND, XI 64, 771.

GREXWACKE, XI. 64. See Silurian and Cambrian rocks.

Grier (R. M.), his photographic process, XVII 546.

GRIESBACH (J. Jacob), XI. 64-his edition of the New Testament, IV. 698; XIX. 837; on the original text of, 835

Grieve (John), his kindness to Hogg, XI

GRIFFIN, XL 64. Graffith (Dr), on test objects for the microscope, XII 804—on the geology of Ireland, XV. 200, 202.

(Mr), on Donegal, VIII. 105.

# GRI-GRO

Griffith's Animal Kingdom, quoted, XI 291, n 1, 293, 298; XIX. 60 n, 68; XXL 997,

screw-propeller, XX. 658.
Griffiths on point-blank range, XI 105.
Griffon, bird, AVI 738

Grillparzer (Fianz), his poetry, XVIII 119

Grilse, IX. 596; XII 239-conversion of smolts into, IX. 596—their conversion into salmon, 597—dates of smolts returning from the sea as grilses, 596-average weight of, in the Tweed, ib, n. 3marked grilse recaptured as salmon,

GRIMALDI, Genoese family, XI, 64. (Antonio), XI 64

(Domenico), XI 64

(F. M), on the inflection and interference of light, I 630, 895; III 801, XVI. 533, 598—on the colours of light,

(GERONIMO), XI 65 (GIOVANNI), XI 64. (RANIERI), XI, 64

GRIMM (F. Melchior), Baron, XI. 65-his misrepresentation of a saying of Fontenelle, I. 23, n —on liberty and necessity, 150, 270-an abettor of atheism, 182has account of Diderot, VIII 15—his opinion of La Harpe, XI 231—on Hume, XII 4, n. 1-on Beccaria IV

- (James Lewis), his philological researches, XVII 528

GRIMMA, town in Saxony, XI 65. GRIMSBY (Great), in Lincoln, XI 65.

harbour, VIII. 75.

Grunshaw on bleaching linen, IV. 768. Grimshaw's rope-machinery, XIX 409. Grindelwald, Swiss village, XI 65.

Grinders, teeth, in man, III 25-in animals, 107-in the elephant and mam-moth, XVI 475.

- artisans, diseases of, XIV 442; XX 98-grinders' asthma, XVI 128. Grinding, of plate-glass, X. 666 — of specula, XXI 135.

Granding-mill for gunpowder, XI 154 GRINDSTONE, XI. 65-quarries of, at Gateshead, X 439.

GRINSTEAD (East), town in Sussex, XI.

Grapes, in horses, XXI. 566. Grison, in zoology, XIV 156 GRISONS, Swiss canton, XI 66 . XX. 882. Gristes, genus of fishes, XII 276 Gustle, II 831 See Cartilage GRIT, OF GRITSTONE, XI 66; XV. 141 GROAT, XI. 66 GROATS, XI 66

GROCEN (William), XI 66. GRODNO, Russian town and province, XL 66, XIX. 521 Grogginess, or contraction of the foot, in

horses, XXI. 561. GROIN, XI. 67.

or groining, in architecture, XI 67, III. 510, XX 731 GRONINGEN, in Holland, XI. 67—university of, 590: XXI. 492

GRONOVIUS (J. Friedrich), XI. 67.

GROOM, XL 68, 669—of the stole, 775—grooms of the bedchamber, ib, 776; in waiting, 775

Groombildge's catalogue of stars, IV. 95. GROOTE EYLANDT, island, XI. 68. Groove, in joinery, XII. 808.

Groppite, mineral, XV. 79 Groroflite, mineral, XV. 112. GROSE (Francis), XI 68

Gross, XI. 68—weight, ib.; III. 595—in law, XI. 68.

Gross-beak, evening, XVI 761-pine, 762 —Philippine, 760—sociable, ib. Grossaspern, XI 68 See Aspern

GROSSENHAIN, town of Saxony, XI. 68. Grossulariaceæ, nat. order of plants, V.

GROSSWARDEIN, city in Hungary, XI. 68. Grote (Mr.), his History of Greece, IV. 218—on Homer, XI. 596 et seg—on the

#### GRO-GUA

ethics of Homer, XIII. 259-on the Helots, XL 308-on the Pelasgi, XVII.

GROTESQUE, XI 68.

GROTIUS (Hugo), XI 68, 573, V 718—his work De Jure Belli et Pacis, I 38, 84, 85, 89, 331—period when his writings began to be generally studied, 46-his opinion of Raimond de Sebonde's principles, 52-Bentham on, 91, n-Samuel de Coccen's strictures on some of his opinions, 92-his History of the Netherlands, 433—his answer to the ethical principles of Carneades, 332—on baptasm, IV 422

- (Guhelmus), XI 70 GROTTAMARE, in the Papal States, XI 70. Giotthus on electro-chemical decomposition, XXI, 628

GROTTO, or Grotta, XL 70-of Antipaios,

III 275 See Cave.

del Cane, XI 71, II. 241, XX. 239—carbonic acid gas of, VI 472. Grottoes of Benee-Hasan, VIII 504

Grouchy (General), at Waterloo, XXI 718. Ground, for aquatinta engraving, III. 332. Ground-nuts, XVI 395-oil of, 495

Ground-slugs, XV 374. Groundsel, plant, V 117

GROUP, in painting, &c., XL 71
GROUSE, XL 71, IX. 762—heteroclyte, XVL 792-pin-tailed, 791-red, ib.sand, 1b -wood, 1b

Grouse-shooting, XX. 224. GROUT, XI 71

GROVE, XI 71 · XVII 772.

(Mr), on physiology, XVII 656.
(Mi), his mode of correcting aberration, XXI 125-his constant battery, 616—his gas voltaic battery, 618—method of transforming daguerr otype plates into engraved plates, 636—ex-periments in voltage electricity, 627, 630, 631, 638, 634

Giover (Rev Mr), on the magnetic pole, XIV. 51-on terrestrial magnetism, 67. Growler, screw gunboat, description of, XX. 665.

GROWTH, XI. 71; II 747-of animals, see Physiology—of plants, V 99, 103 Groynes, their use in tidal rivers, XVI 83 Grozier's specimen of Chinese poetry, VL 578—on Chinese architecture, 582

GRUB, larvæ of insects, XI 71 Grubb (Mr), his apparatus for making lenses and specula, XXI. 135, 142 Grubbers, II. 271—their substitution for

the plough, 290. GRUBENHAGEN, XI 71, 434. Grubenhamm (Ulrich), his wooden bridges,

VL 384. Grueber's travels in China, III 754 Grunauite, mineral, XV. 116. CRUNBERG, in Prussian Silesia, XI 71 Grundler (G), his work on insects, IX 23 Grundtvig (N. F S), Danish author, XIX,

Grundulus, genus of fishes, XII. 252. GRUS, constellation, XI 71; IV. 80-genus of birds, XVI. 797.

GRUTER (Jan), XI. 71. 

GRY, a measure, XI. 71. Gryllotalpa, genus of insects, IX. 158. Gryllus, genus of insects, IX. 157. Gryphæa, genus of mollusks, XVII. 105,

Gua (Du), on equations, IX 287, 290 GUADALCANAL, Spanish town, XI. 72. Guadalcanar, IV. 265.

GUADALETE, river, XL 72. GUADALOUPE, island, XI 72.
GUADALQUIVIR, river, XI 72; III 123; XVII. 647; XX. 487.

GUADALUPE, Spanish town, XI 78.

Hidalgo, peace of, XIV. 714. Guadarı ama, Spanish mountains, XX. 487. GUADI, XI 73.

Guadiana, river, XX. 487; XVII. 647; XXI 302.

#### GUA-GUE

Guadiana or Durango, city in Mexico, VIII. 264. GUADIX, Spanish city, XI 73.

Gauge, in railways, XVIII 753, 794. Guahan, island, XVIII 269, XI. 73

Guanan, Island, XVIII 269, XI. Guanac, reani, V. 188 Guanac, usand, XI 73, V 188 Guana, Island, XI 73 Guananaca, Peruvian city, XI. 73 Guan, bird, XVI. 785.

Guanaco, IV 823, II 605; VI 549, XIV 205; XVII 473 GUANAJUATO, XI 73, XIV 708, 723, 718 —proportion of baptisms and burials in, XVIII. 342

Guanas, reptiles, XIX. 33 Guanaxuato silver mines, XV 235 GUANCAVELICA, Peruvian town, XI. 73. Guanches, VI 163

Guanite, mineral, XV 96 GUANO, XI. 73; II 299. 408-11-use of by the ancient Peruvians, 251. XVII 461-its introduction into Britain, IL. 264 -imports of, into the United Kingdom, VIII. 734-causes of its value, VI. 522, 524—composition of different kinds of, II 408, 409-adulteration of, 410-of the Lobos islands, XIII. 531-its fertilising power on the sugar-cane, XIV. 363—of the Chincha islands, XVII 473.

Guaporé, river, XIV 357.
Guaraná plant, V 186
GUARANIS, XI 73; II 691; IX. 348;
XVII 268—language of, XIII 224

GUARANTEE, XI 73-insurance companies, XII 408 GUARD, XI 74-national, of France, X. 272.

GUARD-BOAT, XI 74 GUARD-SHIP, XI 74.

GUARDAMAR, Spanish town, XI 74. GUARDIA, XI 74.

GUARDIAN, XI 74-of the spiritualities, XI 75-of the temporalities, ib -among the Arabs, III. 352.

GUARDS (the), XI 74; III 665—horse guards, IX. 74—horse grenadier guards, ib —foot, ib.—Scotch, ib —yeomen of the, XI 74; III 824

Guarini, XVII 268.

- (GIOVANNI BATTISTA), XL 75; xviil iii. GUASTALLA, Italian town, XI. 76.

GUATIMALA, XI 76; II 705—declared in-dependent, 702—height of mountains in, XVII 645-map of, XIV Plate. La antigua, XI. 78

- La Nueva, XI 78 Guatimozin, king of Mexico, XIV 706.
Guava, XI 78; V. 192.
Guavare, river, VII 133; XVI 716.
Guavaquil, XI. 78; VIII 387.
- river, XI. 78; VII. 134.

GUAYMAS, Mexican port, XI 78; XIV. 727.

GUAYRA, (La), seaport in Venezuela, XL 78. GUBBIO, Italian town, XI. 78. Guben, Prussian town, XI 79.

Guber, African country, XI. 778.
Gudeson, in mechanics, XI. 79, VI. 261.
fish, XI. 79; IX. 764—angling for, III 161

GUEBRES, XI. 79. See Fire-worshippers Guelder rose, XVII. 764. GUELDERLAND, in Holland, XL 79.

Guelders, town in Rhenish Prussia, XI, 79. GUELPH, order of, XL 79, 840; XIII 119. GUELPES, XI. 79. and Ghibelins, XI. 79; VII. 296

X. 602, XIL 645 et seq Guenee (A.), his entomological works, IX.

Guenon, in zoology, XIV. 140. GUERANDE, French town, XI. 79. GUERCINO, XI 79. See Barbieri

GUERICKE (Otto von), XI. 79-on electricity, VIII 523-his invention of the airpump, I 596; IV. 451; XVIII 32experiment of the hemispheres, XX 539. Guérinan (M.), surgical operation on a pa-

tient in hypnotic sleep, XX. 433. Guerilla warfare in Spain, XX. 472, 478, 471.

Guerin-Meneville (F. E), his works on insects, IX. 16.

# GUE-GUI

GUERNSEY, Island, XI 79 Guerrero, president of Mexico, XIV 712 Mexican state, XIV. 724, 718.

GUESCLIN (Bertrand du), count of Longueville, XL 80

Guest (Mr), XX. 510.

Guettardia, fossil sponges, XVII 93 Guevei, in zoology, XIV 210

Gugenbuhl (Dr), his institution for cretins, XIV 528, 539. Gughelmini on hydraulics, XII 71, 143;

XIX. 184, 185 et seq Guhliche's process for dyeing violet, VIII.

312, 214-and puce colour, 313 Guacum, action of light on, XVI 594 Guiana, XI 81—ant-hills in, III 263— Raleigh's expeditions to, XVIII 801, 802 -serpents of, XIX.54-timber of, XXI

277-weights and measures, 811 BRITISH, XI 81 DUTCH, XI 84

FRENCH, XI. 84-convict settlement ın, XVIII 576

GUIBERT, (J A. H., Count de), XI 84—on war, III 619; XXI 712, 714—the military art, III 620, 622—on the tactics of the Greeks, 624 See Army, passim.

GUICCIARDINI (FIANCISCO), XI 85 —— (Luigi), XI 86 Guiccioli (Countess), VI 39

Guicowar, family of Mahratta chiefs, V. 674, XI 93.

– dı Sıenna, paınter, XVII 61. GUIDONES, XI 86.

GUIENNE, or Guyenne, in France, XI 86;

Guignes (Joseph de), XI 86-on China,

VI. 554, 568, 579.
Gugniaut (M), his report on M. Lebarbiers' search for ancient MSS in the east, XIII. 384.

- (M), on the worship of Buddha, V. 724.

Guild, XI 87; X. 809, 624-guilds of London, XIII 677-in Preston, XVIII. 510-guilds of workers in wool, XXI 914 — disputes between the alien clothiers and the London guild, ib - dean of, VIIL 401

GUILDFORD, town in Surrey, XL 87; XX. 836, 837,

GUILDHALL, London, XI. 87; XIII. 677 Guilding (Rev Landsdown), his contributions to entomology, IX 13—on luminous medusæ, XXL 998, n 2.

Guilday courts, in Scotland, VIII. 404. Guillemots, birds, XVI. 810 Guillié (Dr), on the blind, IV 774, 778

Guillin (John), XI. 87. Guillotine, XI 88; IV. 591; XIV 445. - chaff-cutter, II. 284.

Guiloche, in architecture, III. 510. GUIMARAENS, Portuguese city, XI 88. Guinand (M), his flint-glass discs for telescopes, XXI 121.

GUINEA, in Africa, XL 88; II 226-ants in, III. 263-slave-trade of, XX 320. - New, or Papua, XI. 89, IV 262.

(Gulf of), II. 212 gold coin, XL 89; XV 441; VII 79—superseded by sovereigns, 81. Guinea-Fowl, XI. 89; II. 218; IX. 762; XVI 788

Guinea-grass, in Jamaica, XII. 679, 680, 682.

GUINEA-PIG, XI 89, XIV 188. Guinea-worm, XI 307; XXI, 974. GUINGAMP, town in France, XI 89. GUIPUZCOA, in Spain, XI. 89 Guisards, in Scotland, VIII. 134\*. Guisborough, town in Yorkshire, XI. 90. GUISCARD (Robert), XI 90; VIL 816; XX. 257

Guischardt on military affairs, III. 623, 624 et seq.

Guise, town in France, XI. 90. or Guyse, family name, XI. 90; XIII 695.

(Duke of), X. 32. - (Francis de), la Balafré, XI. 90

# GUI-GUR

Guise (Henri de), XI. 90. Gut-gut, bird, XVI 769. GUITAR, XI. 90; XV. 741.

Guizot (M), X. 196 et seq—his ministry, 216, 219—on Gibbon's treatment of Christianity, 617 - his remonstrance against the extinction of Ciacow, VIL 475—his merits as a historian, XI 543—on the work of Ordericus Vitalis, XVI 702

GUJERAT, or Guzerat, in Hindustan, XL 91, 463 — cornelian mines of, 458 marbles of, 458-culture of cotton in, VII. 447, 448, tobacco, XI 453

Guldberg (O. Hoegh), Danish author XIX. 694

Guldinus, property of, XX 150 Guldenstaedt (John Antony), XI 93. Gules, in heraldry, XI 93, 324

GULF, XI 93; X 483 GULF-STREAM, XI 93, IV 176; VI 772 XIV. 652, XVII 578 Gulf-weed, V 218, XIV. 652; XVII

578

Gull, XI 93: XVI, 812 Gulo, genus of mammalia, XIV. 156 GUM, XI 93; IX. 756; V 73-in chemistry, VI. 516, II 380—nutritive qualities of, VIII. 20—quantities imported. 734-specific gravity of various kinds of, XII. 88-Senegal, V. 190-Alabic, 73, 190-tragacanth, 190; XVII. 421-

anımı, fossil insects in, 103-ammoniac, plant producing, 421 - of the mouth, XI 93-period when

teeth appear m, II 831. Gum-resin, XI. 94; XIX. 88 Gum-trees, XVII 626, XXI. 31, IV. 261.

See Eucalyptus. GUMBINNEN, Prussian town, XI 94. GUMPELTZHAIMER (Adam), XI. 94. GUN, XI 94—trade, 100—of Birmingham,

IV. 732. See Aithlery, Cannon, Gun-making, Gunnery, Rifle, Shooting Gun-battery, IV 510

Gun-boats, in royal navy, XVI 96; XX

GUN-COTTON, XI 94, VI. 516—its use in blasting rocks, IV 757—much more inflammable than gunpowder, XI 156

GUN-MAKING, XI 96—gun-trade, 100—casting of cannon, VI 177—seasoning of gun-stocks, AX. 169

Gun-metal, specific gravity of, XII. 88. Gundamuk, XI 95

GUNDUCK, river, XI 95. GUNDWANA, IN HINDUSTAN, XI. 95. Gunhilda, VIII. 667 Gunnellus, genus of fishes, XII. 808, 310.

Gunner, in the navy, XVI 104.

GUNNERY, XI. 103—in the royal navy, XVI. 108—resistance of the air to pro-jectiles, XVIII. 67. See Projectiles GUNPOWDER, XI 150—not the invention

of Roger Bacon, III. 581, n.; attributed to Schwartz, 581, n, 636—effects of its invention on the art of war, 636, 683; VI. 624—blasting with, IV 754—explosive force of, ib., XI. 108, 109-composition of, III 683; Xl. 151-velocity of the flame of, IX 456-magazine of, at the name of, 12 400—magazine of, at Purfleet, VI. 351—how to enflame it by electricity, VIII. 590—specific gra-vity of, XII. 88, 89—charge of, for fowling-pieces, XX. 213—Count Rumford's experiments on, XXI 229, 281—manufacture of, in Sumatra, XX. 805.

– plot, V. 383, 384. Gunpowder-tea, XXI. 87. Guns, town in Hungary, XI. 160; XIII. 133.

GUNTER (Edmund), mathematician, XI. 160—his line, quadrant, and scale, ib.; XIII. 554—on logarithms, 554—on navigation, XVI. 5.

Gunther's homocopathic veterinary medicine, IL 358

GUNTOOR, in Handustan, XI 160. GUNWALE, XI. 160. Gurhofian, mineral, XV. 92.

Gurické (Otto Von). See Guericke. Gurnards, fishes, XII. 280—as food, IX. 764.

#### GUR-GYM

Gurions, coast of the, IV 745 GURNEY (Elizabeth), XI. 160—her exer-tions on behalf of prisoners, XIV 445; XVIII 568, 569

(Thomas), his shorthand writing, XX 675

- (Mr), extracts from his Life of Dr Thomas Young, XXI 962, 965 Gurungs, Nepaulese tribe, XVI 144. GURWAL, in Hindustan, XI 160.

British, XI 161, XIII. 59.

GUSTAVUS (Wasa), of Sweden, XI 161; VII. 740; XX 846, 847.
—— (ADDLPHUS), XI. 161; VII. 740— his army, III 637—artillery, 684—his reign, XX 847—killed at Lutzen, 850— Hartes' life of, XI 234.

- III, king of Sweden, XX 857, V. 530—his literary productions, XIX. 698—assassination of, V. 543.

- IV, king of Sweden, XX. 859. GUSTROW, in Germany, XI. 162. GUTENBERG (Johann), XI 162—his claims

to be regarded as the inventor of printing, X. 362, IV. 706, XVIII 526works executed by, 530—his connection with Fust, X 362—his statue at Mayence, XIV 368.

animals, XXI 658.

- TRAP, XI. 163. GUTTÆ, in architecture, XI 163; III. 510. Guttenstein, triassic beds of, XV. 206. Gutters, in building, V. 755, 756. Guttes, in heraldry, XI 330 Guttaferæ, nat order of plants, V 186. Guttang of herrings, IX. 638 Guttones, VI 364; X. 726. GUTTURAL, XI 163. GUTTV, in heialdry, XI. 163. Guy (Thomas), XI 163.

of Lusignan, king of Jerusalem, VII 525

de Chauliac, XX. 817.
a rope, XI 163.
Guyaquillite, XV 124

Gur's Cliff, in Warwickshire, XL 163; XXI. 737

- Hospital, XIII. 673; XI 163 Guyon (Madame), XI. 163; I. 351, 352, IX. 506; XV. 757—Bossuet's opposition to,

V 60-her hymns, XII 190. (Mr), XIX. 507.

- (General), XXI. 375. GUYTON DE MORVEAU (Baion L. B), XI 164—his attempt to ground the theory of electric attraction on capillary action, I 731—on the adhesive force of metals. II 140—his actual voyages, 177, 181—on capillary attraction, XII. 95—his works, XI. 166—his pyrometer, XVIII

(M.), on iron bridges, XII 578. Guzerat, in Hindustan, XI. 463. See Guierat.

Gvozdieff, island, XIX. 552.

GWALIOR, town and fortress in Hindustan, XI. 167-Sepoy insurrection at, XVI. 310.

Gwarriahs, Indian tribe, XI. 466. Gweedore, in Donegal, VIII 105.

Gwilt, on the ments of Salisbury, and other English cathedrals, III. 448-on the absurdities of Vitruvius, 451-on the orders of architecture, 463.

Gwynne and Co, their peat fuel, XVII.

Gyarmathi (Dr Samuel), on the affinities of the Hungarian and Finnish languages, XVII. 535.

GYBING, XI. 168. GYGES, XL 168, VL 169; XIII 747. Gyllenborg (Count), Swedish poet, XIX.

Gyllenburg (Count), V. 455

Gyllenhal (Leonard), his work on insects, TX. 12

GYMNASIUM, XI. 168-baths usually connected with, IV. 505. GYMNASTICS, XI. 168.

#### GYM—HAB

Gymnelis, genus of fishes, XII. 268 Gymnetis, genus of insects, IX 127. Gymnetrus, genus of fishes, XIL 303. Gymnite, mineral, XV 80 Gymnocephalus, genus of birds, XVI. 749. Gymnodactylus, genus of reptiles, XIX.

Gymnodera, genus of birds, XVI 751. Gymnodontei, family of fossil fishes, XII.

Gymnodonts, fishes, XII. 312, 314-fossil,

Gymnolæmata, polypes, XXI 1002. Gymnomuiæna, genus of fishes, XII. 232. Gymnopa, genus of insects, IX. 257. Gymnophthalmata, zoophytes, XXI. 1000. Gymnopleurus, genus of insects, IX. 119 Gymnops, genus of birds, XVI. 754 Gymnorhynchus, entozoa, XXI 979. Gymnosoma, genus of insects, IX. 247. Gymnosomata, order of mollusks, XV. 362. Gymnosperms, V 139—embryogeny m, 157—reign of, in geological times, 236 GYMNOSOPHISTS, XL 170, V 271

Gymnotidæ, family of fishes, XII. 233, 234.

GYMNOTUS, XI. 170, VIII 575, 530; XII. 233, 234, 226; XVII. 636—electrical organs of, VIII. 576—method of fishing for, 575

Gymnuia, dentition of, XVI. 451. GYNACEUM, XI. 170-in botany, V. 118,

Gynandrous stamens, V. 127 Gyongyos, Hungarian town, XI 170. Gypætos, genus of birds, XVI. 740. Gypsies, XI. 170—the Bazeegurs of India analogous to, IV. 525—in Hungary, XII.

11—Moldavia, XV. 312—acts against,
XVIII 208—in Turkey, XXI 378—their language, IX. 390

GYPSUM, XL 172; XV. 95, 145, 148; XVII. 620—its use as a manure, II 304, 415; VI 524, 525—specific gravity of, XII 88-mortar of lime and, VI. 381enters into the composition of gauge stuff, V. 742—optical properties of, XVI. 651, 658—in Chile, VI. 548 Gyracanthus, fossil fishes, XVII 117;

XII, 339

Gyration, radius of, XIV 412. Gyrfalcon, XI 248. See Jer-falcon. Gyrnus, genus of insects, IX. 101. Gyroceias, fossil mollusks, XVII. 112. Gyrodus, genus of fossil fishes, XII. 337. Gyrolepis, genus of fossil fishes, XII. 334. Gyrolite, mineral, XV. 76.

GYROMANOY, XI. 172. Gyron, in heraldry, XI. 329 Gyronchus, genus of fossil fishes, XII. 338. Gyronny, in heraldry, XI. 329. Gyrosteus, genus of fossil fishes, XII. 337.

GYULA, Hungarian town, XI 172. Gyulai (Count), Austrian commande chief, XIX. 643.

# $\mathbf{H}$

H, letter of the alphabet, XL 173; IL 613-in abbieviations, 18.

Haan (W. de), his work on insects, IX. 18. HAARLEM, or Haerlem, XI 173—besieged and taken by the Spaniards, II. 643; XI. 568—population, 582—early printing at, IV. 706; XVIII 533.

MEER, XI. 173—draining of, 581.

Haarlingen, in Holland, XI. 229. Haase on the lymphatics and nerves, II.

703. 704 HABAKKUK, the prophet, XI. 174-style of,

XVIII 98.

Habeas corpus, XI. 174.

Acr, XI. 174; XII. 366; XVIII
567—passing of the, V. 427—its suspension in 1794, 553; and in Ireland, 624, 634,

HABERDASHER, XI. 175 - origin of the word, IV. 660.

HABERGEON, XI 175

Habit, Malebranche on the formation of habits, I. 77-its influence on the re-

#### HAC-HAG

spiration of foul air, XXI 541. See Custom

HACHETTE (J Nicolas Pierre), geometer, XI 175-on hydrodynamics, XII 75--his experiments in hydraulics, 146. Hackensack river, XVI. 175. HACKET (John), bishop, XI. 175. Hackles, for artificial flies, III. 150. Hackling, XIX 403; XX 285, 511. HACKNEY, in Middlesex, XI. 176, XIII

- coaches, XI. 176; VII. 43—license to keep, XIII. 436

horse, XI 652, 662

Hackworth, blast-pipe invented by, XX. 682.

Haco, king of Norway, XIX. 754. Hacqueton, XI. 176 Haddington, XI. 176.

HADDINGTONSHIRE, XI. 177of, II. 368-fiars prices in, IX. 532-agricultural statistics, XIX 796, 797, 798population, 799—trigonometrical survey of, XXI 333.

HADDOCK, XI 179; XII. 269-fishery, IX 634, 647—as an article of food, 764.

(Sir Richard), XX. 130.

Haddon Hall, VII. 756. HADELN, in Hanover, XI 179 HADERSLEBEN, in Denmark, XI. 179. HADES, XI. 179

HADERAMAUT, in Arabia, XI 179, III 345, 356

Hadjr, in Arabia, III 341. HADLEIGH, town in Suffolk, XI. 179 HADLEY (John), XL 179—his reflecting telescope, I 748; II 88—his quadrant, I. 748; XVI 30-his sextant, XIII. 687; XVI. 28.

—— (George), on the cause of the trade-

winds, XIV. 647.

Hadow (Mr), on gun-cotton, XI 95
HADRIANOPOLIS, XI 179. See Addianople.
HADRIANUS (P Olius), Roman emperor,
XI 180—Alexandia repaired by, II. 470-his wall in Britain, III. 281; 379, XVI 300, XIX 741—villa of, III 470—mausoleum of, 473—buildings at Athens elected by, IV. 164-his visit to Egypt, VIII 472-his passion for hunting, XII. 32—Jerusaiem room-fortified by, 733, 775—circus of, VI. 734 —reign of, XIX 342—his improvements XIL 32-Jerusalem rebuilt and 858.

HADRUMETUM, XI 180. Hæl machines, XII. 75, 173. Hæmatine and Hæmatosine, II. 780 Hæmatite, XV 108; XIL 540; VL 184. Hæmatopota, genus of insects, IX. 231. Hæmatopus, genus of birds, XVI. 797. Hæmaturia, among cattle, XXI. 570. Hæmocharis, genus of annelides, XI. 307. Hæmodoraceæ, nat. order of plants, 212.

Hæmopis, genus of annelides, XI. 306 HÆMOPTYSIS, XI. 180

Hæmorrhage, XI. 180; XVII. 690—sun-gical treatment of, XX. 821 Hæmulon, genus of fishes, XII. 285. Hamus, mountains, XI. 180, IV. 396. Hacnke (Thadeus), on the vegetable productions of Peru, XVII. 472.

Hæretico comburendo, XI 180, 351. HAERLEBEKE, town of Belgium, XI. 180. Haeilem. See Haarlem. HAFF, lagoon near Stettin, XI, 180.

HAFIZ (S. Eddin Mohammed), Persian poet, XI. 180; XVII. 429—his tomb at Shiraz, XX. 206.

Hafnefiordite, mineral, XV. 71. HAGARENES, XI 181; III. 361. Hagecius ab Hayck (Thaddeus), on brewing, V. 319

Hagen, town of Prussia, XI. 181. Hagenbach (J. J.), his works on insects, IX. 13.

HAGERSTOWN, in Maryland, XL 181; XIV. 331.

HAGGAI, the prophet, XI. 181. HAGIOGRAPHA, XI. 181; IV. 695, 697; HAGUE (The), XI. 181-royal library at,

# HAG-HAL

XIII 422-political riots in 1785, V. 525-collection of paintings at, XI 591 -population, 582-meeting of the statesgeneral at, in 1830, IV 605.

HAGUENAU, French town, XI. 181. Hahn (C. W), his works on insects, IX. 18 HAHNEMANN (Samuel), founder of homeopathy, XL 181, 606 et seq

HAICTITES, Mussulman sect, XI 181. Haidinger (M.), on optics, XVI 550, 667,

Haddingerite, mineral, XV. 96. Hail, XI 181; XIV 658—hall protectors, I 787; VIII 586—great hall storm in

France, X. 48 - electrical origin of, VIII. 586—laws regulating the distri-bution of, XVII. 613.

Hailes (Lord). See Dalrymple (Sir D) Hailsham, in Sussex, XI. 181

HAINAN, island, XI 181-fossil crabs of. XVII. 102

HAINAULT, in Belgium, XI 182; IV. 601, 613, 615-tobacco and chicory grown in, 624.

- forest, IX 336, 337. - scythe, II 313

HAINBURG, town of Austria, XI 182 HAINICHEN, town in Saxony, XI 182 HAIR, XI 182, XVII. 667—structure of

human, II 837—best kinds of, for fishing-lines, III 151-as manure, II 407 of the mammalia, XIV 133, 212imports of, VIII 734—of the Rocky Mountain goat, XXI. 906. ——cloth, XI 183

or down, of plants, XI 183; V. 75

manufactures, XL 183.

- POWDER, XI 183. - salt. XV. 97.

Hair-ball, disease of cattle, XXI 568. Hair-eel, XI 307

Hair-trigger, XI 99.
HAKE, fish, XI 183; XII. 269—fishing,
IX. 648, 634—as food, 764—cured, 646 Hakewill (Dr George), his work on the Power and Providence of God in the Government of the World, L 240.

Government of the Wold, I. 240.

Hakim, or El-Hakim, worshipped by the

Druses, XX 908, VIII 478

HARLUYT (Richard), XI. 183—his Collection of Voyages, IV. 707, n. 2—theatise

on the north-west passage in, XVIII. 164-on the gold and silver of California, VI 97—on the use of house and camel's dung as fuel, X 318, n. 1. Hal, town of Belgium, MI 184

Haladroma, genus of birds, XVI 812. HALAS, town of Hungary, XI. 184. HALBERSTADT, Prussian town, XI. 184. HALBERT, or Halberd, XL 184. Halbesk (Dr), on leprosy, XIII 340. MALCYON, XI 184

- days, XI 184. Halcyorms, genus of fossil birds, XVII.

HALDANE (James Alexander), XI. 185.

HALDE (Jean Baptiste du), XI 185.

HALE (Sir Mathew), XI. 185-on the foundation of the authority of laws, VI, 190 -on the law regarding fishing in England, IX. 602-on mercy to animals, XI. 663.

· (Mr), his improvement on rockets, XI 142.

Halec, genus of fossil fishes, XIL 347. Halecoidei, family of fossil fishes, XIL 347.

HALES (Stephen), D.D., physiologist, XI. 187—on the physiology of leaves, V. 101, 104—instrument used by, to ascertain the force of the ascent of sap in trees, 112-on respired air, XVIII

of Eaton, Lord Hailes' edition of his works, VII. 635. HALESOWEN, town in Worcester, XI 187.

HALESWORTH, town in Suffolk, XI. 187. HALF-PAY, XI. 187; VII. 202, 208 - in

the navy, XVI, 113. Halfponny, VIL 70.

#### HAL—HAL

Halhed (Mr), on the Sanscrit language, XVII 529

Haliætus, genus of birds, XVI 742 Halibut, of Holibut, fish, XI 187, XII 271—as an article of food, IX. 764 fishery of, 634, 648-in Lapland, XIII. 241

Halicampus, genus of fishes, XIL 315 HALICARNASSUS, XI. 187—sepulchre of Mausolus at, XIV 366

Halicore, genus of mammalia, XIV 218 See Dugong.

Halictus, genus of insects, IX. 198
Haliday (W H), on the destruction of
salmon ova by trout, IX. 617

- (A. H.), his writings on insects,

Halientea, genus of fishes, XII 312 HALIEUTICS, XI 188

HALIFAX, in Yorkshire, XI 188; XXI 959-woollen manufactures of, 916, 918 - m Nova Scotia, XI. 188; XVI. 343, 345,

(John of), IIL 581, 796; X. 504. (MARQUIS OF), XI. 189. See Savile. HALIMASS, XI 189, 196.

Haliotidæ, family of mollusks, XV. 380. Haliotis, genus of mollusks, XV 380-fossil, XVII. 111.

Halithea, genus of annelides, XI 300 Halitherium, fossil mammal, XVII. 166

Hall, (Capt. Basil), XI 189-his barometrical observations IV 458—on the falls of Niagara, VI 136—on the vegetation of Conception, II 671—camera lucda employed by, VI 118—his pendulum observations, IX. 572, 573.

 (C M), his achiematic telescope, XVI 534.

(EDWARD), XI. 189—his chronicle on masqueiades, XIV. 339. - (Sir James), of Dunglast, XL 189 -on the strated surfaces of rocks, VII 723.

(John), his improvement in rope-

making, XIX. 410.

- (Josepe), bishop, XI 189 - Robert, XI 190—his objections to Edwards' theory on the principle of virtue, XV. 561-on the theory which

places all virtue in universal benevolence, 563-his intimacy with Sir J Mackintosh, XIII 785

(Dr Marshall), on the capillary vessels, II. 797—on the nerves, 815— on the action of the brain, XVII. 561-on the spinal cord, 674-his discoveries in relation to the nerves, 676. (Mr), his apparatus for singeing cloth, IV 764.

- (Mr), on the aborigines of Tasma ma, XXL 31.

- in architecture, &c., XL 189. - in Wurtemberg, XL 189.

town in the Tyrol, XL 189. Hall's condensers, XX. 654

Hallam (Henry), on the study of the canon and civil law, VI 737—on the feudal system, IX. 521, 525—on Hairington, XI 232-on Hooker, 621-on the English constitution, VIII 759 et seq—his criticism on St Evremond, IX. -on the Orlando Furioso, XVIII 111-on the sermons of Jeremy Taylor,

XXI. 78—on Da Vinci, 591. Halle, Prussian city, XI. 195-of, XVIII. 678; XXI. 492.

- (John), his anatomical work, II 760. HALLEIN, Austrian town, XI. 195. HALLELUJAH, XI. 195, II. 589 HALLER (Albert von), XI. 195; XIV. 462

-his anatomical and physiological labours, II. 765, 766—on fat, 788—on the arteries, 791, 792, 796—on the veins, 793, 795—on the spongy body of the uiethra, 779-on exhalants, 802-on the lymphatics, 804 on the nerves, 814on the mucous membrane, 836-on the serous membrane, 839—on the weight of the brain, III. 82—his discoveries relating to the muscles and nerves, XVII. 676—on monsters, XV. 503-surgery, XX. 820.

# HAL-HAM

HALLEY (Dr Edmund), XL 196-on the proper motion of the stars, L 845—his hypothesis regarding magnetic poles, -physics greatly indebted to him, 658-his voyages for scientific purposes 658, 659, 742-on the trade-winds and monsoons, 659—on the variation of the compass, 1b -his life, works, and character, 697, n 3-on terrestrial magnet-1sm, 741; and declination of the needle. 1b, 990-on probabilities of life, III 220, 230; XII 396-his discovery of the law that connects the height of the atmosphere with its density, IV. 463, I 729—his edition of Apollonius, VII 250, X. 503-his astronomical labours, L 659, III 804-his comet, IV 76, 94 -constellations added by, 80-on aurora borealis, 243, 246-on the barometer, 459-on balometrical measurements, I 729, IV 463—his improvement of the diving-bell, VIII 61, 62 on evaporation, IX. 407, 409; I. 659—on projectiles, XI 107—on magnetism, XIV. 3, 49-on mortality, XV 601, 631 —on the origin of springs, I 659—on navigation, XVI 6—pneumatics, XVIII. 57—on the thermometer, XXI 221.

Halliwell (Mr), on Shakspeare, XX 89 Hallman (C), Swedish author, XIX. 699. Hallomenus, genus of insects, IX. 132. Hallooing, in hunting, XII 46.

HALLOWELL, village in Maine, XI 196. HALLOWMAS, XI. 196.

Halloysite, mineral, XV 83 Halls in universities, XXI 454 et seq. Hallstatt, triassic rocks of, XV 206. Halmahera, island, X. 627 HALMOTE, XL 196.

HALMSTAD, in Sweden, XI 196, XX 864. HALO, XI. 196; VII. 410, XIV. 681, XVI 688—artificial, ib—polarisation of the light of, 689—colours of, VI. 645, 651 See Corona.

Haloid stones, XV. 73 Halorageaceæ, nat order of plants, V 192. Halotrichite, mineral, XV 97

HALSTEAD, town in Essex, XI 196 HALTERES, ancient exercises, XI 196. - in flies, IX. 42, 41, n. 2

HALTWHISTLE, in Northumberland, . XI 196

Haly Abbas, XIV 456. HALYS, river, XI. 197. Halysites, fossil coral, XVII. 97. HALYWERCFOLK, XI. 197. HAM, son of Noah, XI. 197; VIII 45

the land of Egypt, XI 197; VIII.

XI. 197.

town of France, XI 197 thigh of a beast, XI 197; VIII. 734.

Hamadah, table-land in Africa, II. 212. HAMADAN, XI 197; VIII 370 HAMADRYADES, XI 197, VIII. 201 HAMAH, city of Syria, XL 197, XX. 902,

904—plain of, 903 Hamamelidacese, nat, order of plants, V

195. Hamath See Hamah Hamaxobii, XI. 197.

HAMBATO, town in Ecuador, XI 197 Hamburg, XI. 197—Jews in, XII. 783—commerce of, VII 187—corn trade, 403-member of the Hanseatic League XI. 213-hbraries at, XIII. 421-bank of, XV. 489-rules for gas-fitters in, XIX. 616-rate of interest at, XII 431 -lottery, XIII. 697—bills of mortality, XV 628—postal system, XVIII 424—coms, XV 441, 443—weights and measures, XXL 811.

- white, XIII. 302. HAMEL (Jean Baptiste du), XI 199. See Duhamel.

(de V. le M. H. L) See Duhamel. (Dr), his ascent of Mont Blanc, IL. 627

HAMELN, town of Hanover, XI 199 HAMESECKEN, or Hamesucken, XI 199. HAMILCAR BARCA, XI. 199, II. 717; VI. 281, 290 et seq.—son of Gisco, 284.

# HAM-HAM

Hamilco, VI 283.

Hamilton (Alexander), American statesman, XXI 437, 438, 756, 757, 760.

(Anthony, Count), XI 199. (Lord Archibald), his measures for parliamentary reform, V 632, 635, 637 (Captain), his Cyril Thornton, XIX.

(ELIZABETH), XI 200

(GAVIN), painter, XI 200 (Gavin), patron of Burns, VI 18 (Lady), XI 201; XVI 135, 136,

139 n —— (Lord), his bequest to Glasgow University, XXI 476

- (Marquis of), in Charles the First's reign, V 395—his assistance to the Swedes with British forces, XX 849

on the climate of Ireland, XII 504. on the Turks in Syna, XX. 909 (Patrick), XIX 772

(Dr Robert), XI 200tional debt, X. 328 et seq; V 600-on the sinking fund, VIII 753—on capillary attraction, XII. 91—on taxation, XXI 39, 70.

- (Sir W. Rowan), I 918-on conical refraction in biaxal crystals, ib , XVI 548, 656—his peculiar analysis in geometrical optics, I 918—a discoverer in pure analysis and its connection with geometry, 1b n 2

(Sir William), diplomatist, XI 201—his account of Mount Etna, II

190, 196

(Sir William), Professor of Logic at Edinburgh, Coleridge accused of pla-giarism by, VII 111—his erudition and historical cast of mind, XI, 546-on thinking, XIII 568, n-his definition of logic, 571, n-his works on logic, 576, n.—on logic, 582, 583 et seq —his partial negatives, 588—on metaphysics, XIV. 555—on sensation and perception, 563—on the primary and secondary qualities of body, 570, 571—on the classification of mental phenomena, 578, n 1 and 2-on association of ideas, 594, 595-on causal judgment, 601, n 3his criticism on Schelling, 608, n. 2-on the terms subject and subjective, XVI 401-on the senses of taste and smell, XIV 563, n 4-on the muscular sense, 569, n 8-his discussions on education, XXI 443, n 2

(WILLIAM), of Bangour, XI. 201 (William), on Egyptian architecture and antiquities, III 435-Greek inscription published by, XI 384 town in Lanarkshire, XL 199

town in Upper Canada, XI. 199; VI 185, 144, 152.

Hamites, genus of mollusks, XV. 394—fossil, XVII 113. HAMLET, XI 201.

- prince of Denmark, XI. 201. HAMM, in Westphalia, XI. 201.

Hammarskold, Swedish author, XIX. 700. HAMME, town of Belgium, XI 201 Hammel (A. D), his works on insects, IX.

HAMMER, XI. 201-steam-hammer, XII 563

Hammer-beam roof, XIX 392. Hammer-headed sharks, XII. 320, 322. HAMMERFAST, town in Norway, XI 201; XIII. 243.

HAMMERSMITH, XI 201. HAMMOCK, XI. 202. HAMMOND (Henry), XI 202. —— (James), poet, XI. 202 Hamoaze, V. 307, 309, VIII 84; XVIII.

Hampden (Bishop), on moral philosophy,

XV. 536, 537. (JOHN), XL 202; VIL 509; V 394; XXI 688, 689.

HAMPSHIRE, XI. 202-its breed of pigs, II. 355—basın, XV. 211, 212—population and value of property, VIII. 754 —— (New), in United States, XXI. 419.

See New Hampshire. HAMPSTEAD, in Middlesex, XI. 205.

# HAM-HAP

Hampton, in Middlesex, XI 205 Court Palace, XI 205—Raphael's cartoons at, VI 304—Thornhill's paintings at, XXL 237-King Charles' elin at, 274.

HAMSTER, XI 205; XIV. 182-its hybernation, III 180—its fur, X. 348 Hanaper, XI 205—clerk of, VI 764 Hanau, in Hesse-Cassel, XI. 205, 362 battle of, X. 165

Hances, in architecture, XI 205 Hancock, in Maryland, XIV 330

(Mr), his work on the mollusca, XV 327—on the mollusca, 337

HAND, XI. 205, XIV. 134—bones of, III. 33—muscles, 38—motions of, 40. - a measure, XI 205-imposition of hands, 1b

Hand-in-hand fire office, XII 417. Hand-loom, XXI 783

HANDEL (George Frederic), XI. 205, XV.

Handkerchiefs, folding of, VI. 93. Handley (Mr), his account of an agricultural meeting at Mecklenburg, II 253 Handson (Raphe), on navigation, XVI. 5.

HANDSPIKE, XI 207 HANG-CHAU-FOU, Chinese city, XI. 207. Hanging, death from, XIV. 430 — as a capital punishment, 445.

Hango-Head, promontory on the Gulf of Finland, XI 207—English boat, under a

flag of truce, captured near, XIX 511. HANLEY, town in Stafford, XI. 207. HANNIBAL, XI 208-his army, III 629-

invasion of Sicily, VI 281—war with the Romans, 293, XIX. 310—passage of the Alps, VI 293 and n; II 628—his proceedings in Africa, 298—his defeat at Zama, 299-character of, 296; death, XIX. 314—Saguntum taken by, XX. 457—Whitaker on his passage over the Alps, XXI 851.

Hanno, Carthaginian navigator, XI 210 Periplus or voyage of, II 209, X. 461 —translation of his Periplus by Campomanes, VI. 130

- Carthaginian general, XI 210; VI.

286 et seq HANOVER, XI. 210—army of, III. 652— conquered by the French, V. 464 seized and plundered by the French, 596—monarchy, XV 413—coms of, 442, 443—crown of, XI 335—postal system, XVIII 424—university in, XXI. 492—weights and measures, 811.

city, XI 213

in Indiana, XII 375.
village in Hampshire, North America, XI 213.

Hanse Towns, or Hansards, XI. 214; VII. 739; XVI. 2—their commerce, VII. 187—their contentions with Denmark, 739—French trade with, X. 259.

HANSEATIC LEAGUE, XI. 213; X. 303. See Hanse Towns.

Hansen (M), on perturbations, I. 826—on the perturbations of the smaller planets IV. 91-his discovery of two new lunar inequalities, I 826; IV 88—on the moon's figure, I. 813, n. 3—his other investigations, 827—on the pendulum, 855. Hansteen (Prof. Christopher), I 990-his

Dissertation on the carth's magnetism, 1b .- on magnetic variation or declination, 1b—position of magnetic centres or poles, 1b 991—on the lines of dip, -on aurora borealis, IV. 249further researches on magnetism, XIV. 7, 8, 15, 23, 42, 49, 55, 57, 58, 59 et seq. his four magnetic poles, 50—his magnetic observations in Siberia, I. 991; XIV. 60-on the causes of the earth's

magnetism, 64.

HANSY, town of Hindustan, XI. 215—
sepoy insurrection at, XVI. 309. HANWAY (Jonas), XI. 215-on the evils of tea-drinking, XXI. 88.

Hanwell, lunatic asylum, XIV. 528. Haplacanthus, genus of fossil fishes, XVII.

Happiness, XV. 572—Aristotle on, III. 557, 561—Socrates on, XX. 396.

#### HAP-HAR

Hapsburg dynasty, IV 302 Har, Egyptian deity, VIII 438 Har-oer or Aroens, Egyptian deity, VIII.

HARBOURS, XI. 216; XVII 585-harbour of refuge at Portland, XVIII 273—in the Firth of Forth IX 795—of Jamaica, XII 680—at Peterhead, XVII. 485-English, VIII. 721—French, X. 243-Irish, XII 505 See Docks, Ports

Harbs, Arabian tribe, III. 348. HARBURG, in Hanover, XI. 226

Harbutt (Rev William), on a marine worm, XI 297, n 3

Harclay (Sir Andrew), VI. 623; VII 699 Harder, gland of, III 97

HARDERWYK, town in Holland, XI 226 HARDICANUTE, XI. 226—reign of, VIII 662—shipping in the time of, XX. 119. Hardie (Thomas), V 553, 554

- (Walter), his reflecting stereoscope, XX 688

Harding (M), his discovery of the planet Juno, I 835, IV 68—on Mercury and Jupiter, 65, 71

Harding's diary, VII 625. Hardinge (Sir Henry), V. 669, 670—his engagement at Felozeshah, IX. 518 his account of the death of Sir J. Moore, XV 529.

HARDNESS, XI. 226-of minerals, XV. 55; XIII 231.

HARDOUIN (Jean), Jesuit, XI 226 Hardware-manufacture of Birmingham, IV. 731—of England, VIII. 729, France, X. 254; Spain, XX. 490, Staffordshire, 530. See Cutlery, Iron Manufacture,

Hardwick, seat of Duke of Devonshire, VII. 756.

HARDWICKE, earl of, XI 226 See Yorke (Su Philip)

(James), his contributions to ento-

mology, IX 22. (Sir Thomas), on capstans, XX 23. Hardy's escapement, VII. 13. HARE, XI. 226; XIV 187; XXI 548—as

food, IX. 762—teeth of, XVI 454, 455— hare skins, X. 349, 350—of Java, XII. 704—hare hunting, 41—shooting of, XX. 222

(JULIUS CHARLES), XI. 226—his vindication of Luther, XIII. 739—his Life of Sterling, XX 692.

- (Dr Robert), of Philadelphia, his electrical machine, VIII. 538, 604—his single-leaf electrometer, 619; his gal-vanic deflagrator, XXI 612; its results, 626-his calorimotor, 616.

Harebell, order of plants, V. 197-the harebell, 123

Haredwara, in Hindustan, XII 49. Harelip, surgical treatment of, XX 835. HAREM, XI. 228, VII 302; XXI 379. Har-em-heb, Egyptian king, VIII 461. Harengula, genus of fishes, XII 237. Harfang, bird, XVI 746 HARFLEUR, French town, XI. 228

Harford's notice of Wharton, XXI. 734. Hargraves (Edward Hammond), his discovery of gold in New South Wales, IV

Hargreaves, or Hargraves (J), his spinning jenny, III 609, XX 510—carding machine and spinning jenny, VII. 441. Harshara, in Hindustan, XI. 228 HARINGTON (Sir John), poet, XI 228

Harlan (Dr), on a fossil whale, XVII. 166. Harland (Sir Robert), V. 485, 486. Harleian MSS, XI 229; XIII. 391. HARLEQUIN, XL 228, VIII. 148.

Harley (Röbert), earl of Oxford, XI. 229; III 217—his kindness to Defoe, VII 695—his friendship with Swift, XX. 878. HARLINGEN, in Holland, XI 229

HARMATTAN, African wind, XI. 229; XX. 271; XXI 543. HARMODIUS, XI. 229; III. 532; IV. 197. HARMONIA, XI. 229; VI. 51.

HARMONICA, musical instrument, XI 230; XV 713, 714.

# HAR-HAR

Harmonical progression, XVIII. 639. HARMONICS, XI 230, II 107.

- acute, XI 230; II. 110; XV 701 HARMONIUM, musical instrument, XI 230 HARMONY, in music, XI 230 IL 110, XV. 719—theories of, 701—in architecture, III 484

Hall, socialist establishment, VII

HARMOSTÆ, XI 230. Harmotome, mineral, XV 77. Harmouth, fish, XII 260

Harness, exports of, from Britain, XIII.

Haro, town of Spain, XI 230 HAROLD I., king of England, XI 280 VIII. 662.

II, king of England, XI 230, VIII 663, 664—killed in the battle of Hastings, 665

- Hardrada, king of Norway, VIII

Harfagr, king of Norway, XVL 316, 317 and n 1, XII 197
Haroun-al-Raschid, II 4, 13 See Anion-

al-Reschid and Harrin-al-Reschid HARP, XI 230

Harp-shells, XV 386

Harpa, genus of mollusks, XV 386 Harpagifei, genus of fishes, XII 307. HARPAGINES, XI 230.

Harpagus, VII. 612; XIII. 748. Harpalici, insects, IX. 88 — synoptical table of, 1b

Harpalus, genus of insects, IX 88 HARPE (Jean François de la), XI 230— his eulogy of Condillac, I. 116, n—his definition of Reflection, and on the moral tendency of the French school of metaphysics, 1b.—his character of Aguesseau, II 425—Voltaire's letter to,

XXI 667. Harper's Ferry, village in Virginia, North America, XI 231

Harpi-chruti, Egyptian deity, VIII. 439 Harpies, birds, XVI 743

HARPINGS in a ship, XI 231 Harpocrates, Egyptian deity, XI. 231, VIII. 439

HARPOCRATION (Valerius), grammarian, XI, 231,

HARPONULLY, in India, XI 231. HARPOON, XI 231

HARPSICHORD, XI 231; XVII 704. Harpyia, genus of birds, XVI 743. HARPYLE, or Harpies, XI 231. HARQUEBUSS, XI. 232.

Harrar, African town, XII 50 HARRIER, XI 232, 770; XII 41-packs of in Britain, 39

- bird, XVI. 744. Harrild (Messrs), then composition rollers, XVIII 549

HARRINGTON, in Cumberland, XI. 232
——— (JAMES), XI. 232—meits of his Oceana, I. 47 n.

Harringtonite, mineral, XV. 75.

HARRIOT (Thomas), XI. 232; XIV 742—
his improvements in algebra, I 559; -observed the spots of the sun not more than a month later than Gahleo, I 559—on equations, IX. 284,

299—telescopes used by, XVI 528 Harris (A C), on Egypt, VIII. 421—his discovery of an oration of Hyperides, XII. 192.

(General), V. 567; XXI. 818 (Howel), of Trevecca, XIV 693.

(JAMES), XI 283 - on grammar, X. 754 et seq.—on money, XVIII 220. (Moses), his works on insects, IX. 7 (Mr), on pictures seen by each eye separately, XX. 684.

(T. W.), his works on insects, IX 22

(W. C), on elephant-shooting, XX.

(Sir Wm Snow), on electricity, VIII 534-on the influence of heat in promoting conduction. 540, 541-on the attraction of spheres and planes, 550on the evolution of heat by electricity, 590, 591—his electrical machine, 604—

#### HAR-HAR

his ship-conductors, 610; XX. 24-his electroscope and electrometer, VIII 620 -his measuring electrometer, 622—his bifilar balance, 623-his electrical balance, 624—on magnetism, XIV 13, 20, 23, 24, 35, 67-his compass, 80-his magnetometer, 83-his experiments in voltaic electricity, XXI 627

HARRIS, in the Hebrides, XI. 238: XIII.

SOUND OF, XI. 233

HARRISBURG, in Pennsylvania, XI 233geology, XVII 395—railway at, 397 HARRISON (John), XI 233—his escapement, VII. 8-his going istchet, 14obtained the first Government reward for chronometers, 8; XIII 686—his compensation balance, VII 29

(Mr), of Blackburn, his power-looms, XXI 789

Harrogate, in Yorkshue, XI 234—its mineral waters, XV. 37

Harrow, agricultural implement, XI. 234, II 272, 273. HARROW-ON-THE-HILL, in Middlesex, XI

234 HARRY, BLIND, or Harry the minstrel, XI

234 HART, XI 234. See Deer.

—— (Mr), of Glasgow, his galvanic battery, XXI 611 HARTE (Walter), historian, XL 234

HARTFORD, in Connecticut, North America, XI 234-Trinity College at, VII 295asylum for the insane, also for the deaf and dumb at, VI 295.

Hartine, mineral, XV 124. Hartite, mineral, XV 125

HARTLAND, town in Devon, XI 284.

HARTLEPOOL, town in Durham, XI 234docks and harbour of, VIII. 75, 266chalybeate spring at, ib. — romantic rocks near, 267

HARTLEY, in Northumberland, XI 235 — (DAVID), XI 285—on the origin of our ideas, I 115, n—his Theory of Human Nature, 170, 171—his Observa-tions on Man, 378 et seg, 386—on asso-ciation of ideas, 170, 379, 381; XIV. 596

-his merits as a metaphysician, 1.381 his vibratory theory of sensations. XVIII 68

(Messrs), their manufacture of sheet-glass, X 664

Institution, XX. 452.

Harthb, on agriculture, II. 257.

Hartmann (Prof.), his edition of Edrisi's

geography, VIII. 412 Hartog (Dirk), his voyage, IV. 252. Hartshorn, spirit of, XL 235

Hartz Mountains. See Harz Mountains. HARUN AL RASCHID, calph of Bagdad, XI 235—Bagdad improved by, IV 363—his residence at Derbend, VII 753—his love of science, XIV. 456—tomb of, 546-Arabic learning under, XVII 521-his patronage of medicine, XX. 814

HARUSPICES, XI 235; III 720. Harvard University, V. 62; XIV. 340; XXI 423—hbrary, XIII. 429, XIV. 340.

HARVEST, XI. 236—period of, in different countries, V 221, XVII. 625; in France, X. 241 - cart. II 279

Harvest-bug, III 389. Harvest-moon, IV. 34.

Harvesting implements, II. 276. Harvey and Co, their pumping-engines, XX. 614

(Gabriel), XI. 363; XV. 800. (Major), on the Belgian army, III.

(Dr WILLIAM), XI 236; XIV. 460—has discovery of the circulation of the blood, II. 761; importance of that discovery, XX 818.

HARWICH, town in Essex, XL 287; IX. 337. Harwood (Dr), on editions of the ancient

classics, IV 711. HARZ, OT HARTZ MOUNTAINS, XI. 287, 211

# HAR—HAU

employments of the inhabitants of, 212

Harzgerode, town in Germany, XI. 237. Hasan Sabah, XVII 437. Hasbeiya, in Palestine, XVII 185. Hase (D1), on theology, XXI 212. Hasheesh, VIII 431, 448. See Hemp. Haskin's quicksilver pump, XVIII 84
Haslam (Dr), his definition of insanity,

XIV. 526 Haslar Hospital, VIII 84—Parry's super-intendence of, XVII 308

HASLEMERE, town in Surrey, XI 237 HASLINGDEN, town in Lancashne, XI 237 Hassa (el), or Bahrein, in Alabia, III 343 Hassall (Dr Arthur Hill), his work on in-croscopic anatomy, II 770—on adultera-tions of food, IX. 769, 700—of tea, XXI.

Hassan Aga, II 568 Caliph, anecdote of, II. 455.

Hasselquist (Frederic), Swedish naturalist, XI 238

HASSELT, town of Belgium, XI 238 Hassenfiatz (M), on the speaking-trumpet, II. 107

HASTA, or hasta pura, XI 238 HASTATI, XI. 238; III 630, 631.

Hastenbach, battle of, V 464. Hastings, a Calcutta-built fingate, XXI 277. - (Marquis of), his administration in India, XI 506—on the zemindars of Bengal, IV 650—abolition of the censoiship by, XVI. 203

- (WARREN), XI 238, 490, 494 et seq. - (WARREN), Al 238, 390, 494 &t 867,
- his proceedings in Oude, XVII 21—
charges against, V 509, 520—his impenchment, 520, 524—traal of, 519, 528,
534, 539, 556, 777—considerations regarding his conduct in India, 524—his acquittal, 556.

town in Sussex, XI, 238; XX, 838, 839—battle of, VIII. 665; XX. 840—sand rocks of, XV 209—singular case of atmospheric refraction at, IX 490

HAT, XI 240—manufacture of, in Paris, X 256—at Oldham, XVI 506—use of oak bank in dyeing, VIII 304, n 3 straw hats, XI. 242

HATCHEL, XI. 243.

Hatchet (Mr), on magnetism, XIV. 27. Hatchetine, XV. 124 Hatching, in engraving, VIII 805

- of eggs, artificial, XVIII 815. HATCHMENT, IN heraldry, XI. 243, 340. HATCHWAY, XI. 243

HATFIELD, town in Hertfordshire, XL 243. - house, XI 243.

Hatsell, on parliamentary forms of pro-cedure, XVII 297, 299 HATHERLEIGH, town in Devon, XI. 243. HATRAS, town in Hindustan, XI 244 HATTEMISTS, Dutch sect, XI. 244.

HAUBERK, XI. 244. Hauch (J. Carstens), Danish author, XIX. G95

Hauerite, mineral, XV. 121. Haughton (Prof.), on the granites of Ireland, XV. 136, n -on other Irish rocks, 137, 138-on faults in 10cks, 176-on cleavage, 179-on granite veins, 186.

HAUKSBEE, or Hawksbee (Francis), XL 244, I. 733 and n .- on the luminous barometer, IV. 455-his balometrical experiment, 459—his contributions to electricity, VIII 524—on capillary attraction, XII. 93, 96-on magnetism, XIV. 4-his airpump, XVIII. 34.

HAUNCH, XI. 244. Hauran, mountains, XVII. 187, XX. 902

-province, 910. HAURIANT, in heraldry, XL 244.

Hausset (Madame du), on the character of Quesnay, XVIII. 733. Haussman on voltate electricity, XXI 619. Haussmann on dycing blue, VIII. 304. Haussmannite, mineral, XV. 111.

HAUTBOY, wind instrument, XI. 244. See

# HAU—HAY

HAUY (Réné Just), XI. 244-on capillary attraction, XII. 91, 96-on crystallization, VIL 546, 548, 551-on the pyro-electricity of minerals, VIII. 529—on the electricity of minerals, 538, 559, 562 et seq his electroscopes, 558—on double magnetism, XIV 7

- (Valentine), his invention of printing for the blind, XVIII. 553.

Hauyne, mineral, XV. 74.

HAVANA, in Cuba, XI 244; VII 565, 567; XXI 837 — sugar, XX 796— tobacco, XXI 294, 295

HAVANT, in Hants, XI 244 Have (La), river in Nova Scotia, XVI

HAVEL, river, XL 244
Havelock (General), XVI. 306—his relief
of Lucknow, and death, 308

Haven, X. 483 HAVERCAMP (Signbert), XI 245. HAVERFORDWEST, in Pembrokeshire, XI 245, XVII 374

HAVERHILL, town in Suffolk, XL 245 village in Massachusetts, XL 245. Havernick, on the Old Testament, IV

HAVRE (le), or Havre de Grace, seaport in

France, XI. 245—population, X. 277 Haw, XI. 246 HAWAII, XL 246, XVIII 270

HAWARDEN, in Flintshire, XL 246—fire-brick clay found at, V. 346 HAWASH, river, XI 246; II 55 Hawes (Stephen), XI 246.

Hawfinch, XVI 761. HAWICK, Scotch town, XI 246; XIX 452 453-Gavin Douglas, rector of, VIII 114.

HAWK, XI 247, 248, II 77; XVI 743
——plasterers', V. 741.
Hawk's beak, in architecture, III. 468

Hawk-moths, IX. 209

Hawke (Admiral), V. 462, 465.

(Mr), on the prospects of emigrants to Canada, VI. 148. Hawke's patent organ, XVL 713.

HAWKER, XI. 247. - (Colonel), on wildfowl shooting. XX 217

Hawkes (John), on hunting, XII 35 HAWKESBURY, river of New South Wales XL 247, XVII 608

- (Lord), on the peace of Amiens, V 589-secretary of state for foreign affairs, 577. See Liverpool, second Earl

HAWKESWORTH (John, LL.D), XL 247account of Cook's first voyage, drawn up by, VII. 341—arded by Dr Joseph Warton in publishing The Adventurer,

HAWKING, XI. 247. See Falconry. HAWKINS (Sir John), navigator, XI. 249.

(Sir John), historian of music, XI. -his edition of Walton's Angler, III 163; XXL 696.

(John Isaak), his filter, IX. 581. Hawksmoor's architecture, III. 455. Hawkwood (Sir John), XIII 113 HAWLBOWLINE, Island, XL 250; VII 371 Hawley (General), defeated by Prince Charles at Falkirk, V. 461.

Haworth (Adrian Haidy), on the insensibility of insects to pain, III. 177—his entomological works, IX. 11.

Hawse and Hawse-holes, XI. 250. HAWSER, XI. 250.

Hawthorn, XVII. 760, 763

- (Messrs), their locomotive engines, Hawthornden, VIII 408-residence of

Drummond the poet, 190, 191.

Haxo (General), on fortification, IX. 834. HAY, town in Brecknockshire, XI 250. - (Richard), his proposals for print-

ing Fordun's Chronicle, IX. 778. Haycraft on the heat of gases, XL 274. HAYDN (Francis Joseph), XI 250—his diligence in study, XV. 729—his imitatave music, 737—on melody, 729. See

(JOHN MICHAEL), XI. 251.

# HAY-HEA

HAYDON (Benjamin Robert), historical painter, XL 252; XVII 83, 84, 85 HAYE, (La), town in France, XI 253 Hayes (Capt John), H.M.S. Magnificent saved by, XX 19 (Richard), on life annuities, XII

Haygarth (Dr), on mortality, XV 603on Perkins' metallic tractors, XX, 415 HAYLE, seaport in Cornwall, XI 253 HAYLEY (William), XI 253.

HAYMAKING, XI. 253; II 330-defects of the Scottish method, 331-haymaker, implement, 279

Haymarket Theatre, London, XIII 676. XXL 173.

HAYNAU, or Hamau, in Prussian Silesia, XL 253

- (General), his operations in Hungary, XII. 25

Hayladin, king of Algiers, II 567 Hayter (Rev John), his examination of the Herculaneum MSS, XI 345

HAYTI, or San Domingo, XI. 253, II 707
—army of, III. 661—abandoned by the British in 1798, V. 565-French invasion of, in 1801, 591-bucaneers of, 707declared independent, II. 707-Faustin I, emperor of, 708-monarchy, XV. 413 -French trade with, X 260 - the Spaniards in, XVII. 30-measurement of the length of the pendulum at, VII 230—reptiles of, XIX 24, 34, 36 weights and measures, XVI. 811. HAYWARD, XI 258

 (M1), his essay on the poet Rogers. XIX 247, n 1—his description of Rogers' residence, 248.

Hazara, in the Punjab, XVIII 687. HAZARD, game of, XL 258

HAZAREEBAGH, town in Hindustan, XI.

HAZEBROUCK, town in France, XI 258 MAZEL, XI. 258, XVII. 765—order of plants, V. 208—culture of, XI 717—hazel-nuts, XVI 395

Hazel-colour, in dyeing, VIII. 318, 314. Hazel-fly, in angling, III 153 Hazilit (William), XI. 258—his connec-

tion with Northcote, XVI. 298. Head, regions of the, III. 1-its size in

male and female infants, 2-bones of, 15-muscles of, 38-of annelides, XI. 293 of insects, IX. 31—of the mammalia, XIV. 133-some animals continue to hye after losing it, III. 177-wounds of,

- in botany, V. 115

—— (Sir Francis), his administration in Canada, V. 665, VI. 159—on the condor, XVI 738—celebrity given to Langensch walbach by the publication of his Bubbles, XIII. 183.

- (Sir George), on the Vatican Library, XIII 412, 411, n. 4.

Headache, XVII. 700 HEADBOROUGH, XI. 259.

Headley (Mr), on Drummond's poetry, VIII. 192, 193.

Headon eocene rocks, XV. 212, 213 Heads of Colleges at Oxford, XXI. 455 HEALFANG, XI 259.

Health, riding and hunting beneficial to, XI. 673, XII. 33-effects of profession and trade on, XIV. 442—circumstances affecting, 440, 443—gymnastics, as contributing to, XI. 169—of seamen, XVI. 105, 106—salubrity of the atmosphere. IV. 184-marshy countries subject to fevers, 1b .- influence of factory labour on, XIV 279-Public Health Act, XIX. 604-effects of the use of tobacco on, XXI 279. See Disease, Exercise, Sanitary Science, &c.

BOARD OF, XL 259; XIX. 604 Hearing, XI 259; XIV 564, IL 98 et seq.; XVII. 679—in brutes, III. 178—in fishes, XII 220; IL 99, 100-in bees, IV. 575-insects, IX. 45-organs of, in man, III. 45—in brutes, 98—organs of, in crustacea, VII. 538—in relation to music, XV. 703. See Ear, Deaf and Dumb

# HEA-HEA

Hearing-trumpet, XXI 361 Hearman and Dearn's filter, IX. 580 Hearne's journey to Coppermine River, X. 473; XL 791, XVIIL 169 - on the beaver, XIV 185

Hearsey (Major-General), his address to

the mutinous sepoys, XVI 301, n Heart, anatomy of, III 63—Mondino's description of, II 756—Aristotle's notions of, XIV. 122-course of the blood in, III. 65; XVII. 661—comparative anatomy of, III. 112—in mollusks, XV. 325-of ophidian reptiles, XIX 48diseases of, in the domestic animals, XXI 574

Heart-wood, V 81, XXI 267 Hearths, building of, V. 740.

HEAT, XI 260-nature of, 1b.-diffusion of, 261-effects of, 267; I 755-quantity of, in bodies, XI 272-variations of temperature, 275-doctrine of, I. 755views of Aristotle, Bacon, and the al-chemists on, 756—considered in the eighteenth century as a branch of chemistry, 925-thermometers, 756 et seq -Boerhaave's views as to its distribution. 758-Wolfius and Mairau's speculations on, 1b -Dr Martine the first judicious writer on, ib .- discovery of the congelation of quicksilver, 759—discovery of latent heat, 760 (see latent heat)— Dr Black's discoveries respecting, ib (see Black, Dr Joseph)-specific heat, 761 (see that entry in Index)-radiant heat, 942 (see Radiant Heat)-conduction of, 951, mathematical theory of, 946 - Fourier on, 946 (see Fourier)-Leslie's observations on increase and diminution of temperature by chemical union with bodies, 760-Irvine on, 926, 927; IV. 739, his theory of capacity, I. 761, 927-experiments of Wilche and Lavoisier, 761, 932-determination of the absolute zero, 761-Dr Crawford's views, 761, 927; IV 739—views and experiments of Scheele, I. 762—invention of the pyrometer, 763—a thermometer for measuring high temperatures still a desideratum, 763—metallic and register thermometers, ib—differential thermometer, 764 (see that entry in Index)-hygrometer, 766 - elasticity of, -radiation of, 768 - pyroscope, 769 -æthrioscope, ib - refrigerator, ib -Prof Kelland's theory of, 952-Dalton's researches relating to, 933 et seg (see Dalton)-Lavoisier's contributions to, 932 (see Lavoisier)-Gay-Lussac on the specific heat of gases, 940-Rumford on the economical applications of (see Thompson, Benjamin)—Dulong on the laws of, 953 (see Dulong)—Prof J D Forbes on, 952 n. 4, 956, 957 and n 2; XI 267-Regnault's contributions to the science of, I 957-refrangibility of. 956-coloration of. 1b -mechanical effect of, 947-moveable equilibrium of, 944 action of different substances on the rays of, 956-polarization and depolonsation of (see these articles)—relation of light and, XIII. 454-Leslie on (see Leshe, Sir John)-reflection of, VI 1-solar, I. 950; VI 2; XIV 637 -in different latitudes. VI. 769 et sea -mode of measuring, XIV 638-its influence in chemical combinations, VI. 440-absolute quantity in the atmosphere the same at every elevation, 778—capacity of air for, at different degrees of rarity, 1b. - 1ts propagation through solids, liquids, and gases, 782, 783-performed by tremulous pulses. ib -revolution in the mechanical arts from the application of heat, I. 770-Papm's digestor, 1b -gradual improvement in the steam-engine from a knowledge of the laws of, ib -effect of heat on the barometer, IV. 456; correction of that instrument as effected by, 457 -cold the diminution of, VII. 99-Wollaston's cryophorus, 544—its influence on fluidity, XIL 73; and on the motion of fluids, 145-its influence

# HEA-HEB

on magnetism, XIV 6, 9, 35—connection between heat and magnetism of the earth, 11-its effect on the distribution of magnetism in magnets, 37conversion of, into mechanical energy, 418 - on land and water as recipients and communicants of, 643fluence in promoting the conduction of electricity, VIII 540, 541-property of some bodies of becoming electrical by heat, 529, 557-its influence on the electrical fluid in metals, 561-evolution of, by electricity, 591-evolution of, in blossoms of plants, V 149-excites electricity in some minerals, XV. 60-of the interior of the globe, AIV 636, XV 184—death from, XIV 431—its effect on the health of bakers, &c, 443 -heat of the spectrum, I. 954, 956influence in producing a polarising structure in glass, XVI 540—effect of, on the double refraction of crystals with one, two, and three axes, 657circular polarization of, 683-fancied coldness of the moon's light, VII. 101, 766; discovery of heat in, XIV. 485 - climatological distribution of, 670 animal heat, XVII. 665-its influence on health, XIX 608—heat liberated by combustion, XX. 353—mechanical theory of, 560—constituent heat of steam, 566-dynamical expression of quantities of, 618-laws of the expansive action of, ib—efficiency of heat-engines, 619—heat-economiser, ib—of combustion of coal and coke, 630 Count Rumford's publications on, XXI 231, 232-sources of volcanic, 606-pioduced by voltaic electricity, 626, 637. See Boiling, Burning-glasses, Climate, Cold, Congelation, Dew, Evaporation, Latent Heat, Pyrometer, Radiant Heat, Reflection, Steam, Temperature, Theimometer, Thermo-electricity, &c.

HEATH, XI. 276-order of plants, V. 198 —in Africa, II 216—plants growing on, V. 221—culture of, XI 757—region of heaths, V 228, XVII 629.

breed of sheep, II 347

(Josiah), his patent for the manufacture of cast-steel, XXI 321

—— (Rev Dunbaı), on Egyptian pa-pyri, XI 409; XVII 264 Heathcoat's lace-frame, VIL 451; XIII

Heathen, meaning of the word, I 456. Heathenism, relation of Mohammedanism to, XV 307

Heather, favourite food of bees, IV. 587. HEATHFIELD (Lord), XI 276 See Elliot. Heating, nature of, for ventilation, XXI.

Heavens, phenomena of, IV 1—sun's course in the, 11—words denoting heaven, in different languages, XIII. 199 See Astronomy.

Heavy spar, XV. 94-specific gravity of, XII. 88. Hebdomadal council, in university of

Oxford, XXI 456 Hebdomarius, VIII 368. HLBE, goddess, XI. 276.

- planet, IV. 91.

HEBER (Reginald), bishop of Calcutta, XI. 276-on the occurrence of the lion in India, 455, n 2-on the Himalayan vulture, 456-on Cawnpore, VI. 357on Kemaon, XIII. 59, 60—on the Himalayas, XI 448-on a mode of fishing in India, 457—on Hindu penance, 469 the Indian races, 463 et seq —on Oude, XVII. 18—on the prevalence of the taste for English goods in India, XI. 461-on Lucknow, XIII. 713 - Delhi, VII. 706.

HEBERDEN (William), physician, XI. 276— on rain, XIV. 656, 657—on mortality, XV. 602, 608

Hebertists, X. 85

Hebrew Language, XI. 277; XIII 209; XIX 838, 834—accents, II. 75—alphabet, 614—and Chinese, VI. 558—Bibles, IV. 697—lexicons, XVII. 526—gram-

# HEB-HEI

mars, 1b -Hebrew poetry, XVIII. 97 See Jews.

HLBREWS, Epistle to the, XI 277. HEBRIDES, XI 278 - ancient names of,

VIII 370-confounded with Hyperboreans, II 10 - cattle of, 342 - pigs, 355-heights of mountains in, XVII 643—Dr Johnson's visit to, XII 801; V 64-geology, XIX. 792-mountains,

----- (New), islands, XI 280; IV 265. Hebron, XI 280, XVII 189, 190 HEBRUS, river of Thiace, XL 280. HECATÆUS, XI 280 HICATE, goddess, XI 281. HECATOMB, XL 281 HECATOMBAEON month, XI 281 HECHINGEN, German city, XI 281 Heckling of flax, XIII 495 HECLA (Mount), XI. 281, XII. 201, IX. 384, XVII 644 HECTARE, XI 281, X 284 HECTOGRAMME, XI 281, X 284 HECTOLITRE, XI 281, X 284 Hectocotyles, entozoa, XXI 982. HECTOMETRE, XI 281, X. 284 HECTOR, XI 281 - character of, XVIII

100 HLCUBA, wife of Priam, XI 281; XVIII 511

Hoddles of looms, XXI. 783 et seq Hederacee, nat. order of plants, V 195 Hedge trees and shrubs, XVII 760 HEDGEHOG, XI. 281; XIV. 150, XXI. 548—canthardes eaten by, III. 179—hybernation of, 180, XII 62—pauing of, 182-stores up food, III 181-dentation of, XVI 451.

Hedges on farms, II. 269-hedge plants, V 221

HEDJAZ (el), in Arabia, XI 281, III 341 et seq

HIDWIG (Johann), XI. 281-on the lymphatics, II 804—on the villi of the ileum, III 61—on the reproductive organs of mosses, V 153.

Hedychrum, genus of insects, IX. 193 Hedychane, XV 106.

Hedysarum gyrans, motion of its leaves, V 108, 109

Heegel (E), his works on insects, IX 20

Heel-bone, III 36, 37. Heer (Osw), his works on insects, IX. 20 Heeren (Prof.), on the course of civilisation in Egypt, III. 437-on the Pelas-

gr, 439 — on the ancient kingdoms of Persia, 438—on the African and Asiatic nations, XVIII 161, n 2—translation of his essay on the Crusades, XXI 589

HEGAL (G W Friedrich), XI. 281-on philosophy, XIV 551—his contempt for Euglish philosophy, ib, n 6—on cos-mology, 605, n. 5; his system of philosophy, 608-his pantheism, XVII 237 -his intimacy with Schelling, XIX. 714 Hegesippus on the posterity of Jude, XIII. 14.

Hegeter, genus of insects, IX. 129 HEGIRA, XI. 284—era of the, VI. 673, 677; XV 800.

Heiberg (J. Ludvig), Danish author, XIX. 695.

Madame), XIX. 695.
Heidelberg, XI. 284—university of, IV. 360; XXI. 492—library of, XIII 421—plundered by Count Tilly, II. 633 catechism, XXI. 496.

Heights, mensuration of, XIV. 502; in the trigonometrical survey, XXL 386 of the principal mountains in the world, XVII 642 et seq See Barometrical Measurements.

Heilbronn, town of Wurtemberg, XI 285; XXI 938

HEILIGENSTADT, town in Prussian Saxony, XI. 285.

Heilmann's wool-combing machine, XXI

Heilmar, lake, XX. 861. HEINE (Heinrich), German poet, XI. 285. HEINECCIUS (J. Gottlieb), jurist, XI. 285. Heinecker (Dr), on the dew-points at Fun-chal, IV. 184.

#### HEI-HEL

Heineken on wood-engraving, XXI 902,

Heinse, his novels, XIX 292. Heinsius (Daniel), XI 286 ——— (Nicolas), XI 286. HEIR-AT-LAW, XI 286.

by destination, XI 286 apparent and presumptive, XI 287;

Heister (Laurence), on surgery, XX. 818. Helæus, genus of insects, IX. 131 Helcon, genus of insects, IX. 188 HELDER, town in Holland, XI 287. Helderberg group of rocks, XV 199. HELENA, daughter of Leda, XL 287, XVII 285

luminous meteor, VI 328

(St), empless, XI 287—her pilglimage to Jerusalem, XII 734; XVII.

---- (ST), island, XI 287—Halley's voyage to, I 658—meteorological observations, XIV 686

HELENSBURGH, in Dumbartonshire, XI 288

HELENUS, son of Priam, XI 288 Helfer (J W.), his work on msects, IX 17

HELIACAL, XI 288 Heliades, sisters of Phaethon, XI 288, XVII. 504. HFLIÆA, XI 288.

Helianthoida, polypes, XXI 1002 Heliascs, genus of fishes, XII 265 Helical motion, XIV 389—teeth, 396 Heherdæ, family of mollusks, XV. 373. Helicon, XI 288

astronomer, III. 789
Heliconius, genus of insects, IX 207. HELIER (St), capital of Jersey, XI 288, XII 730.

IILLIGOLAND, ISlands, XI 288 Helioceras, fossil mollusks, XVII 113 Heliocidaris, fossil echinoidea, XVII. 100 Heliodorus, XI 289

Roman surgeon, XX 813.

Hehography, XVII 545 Heliolites, fossil corals, XVII 97 Heliometer, XL 289, I 865—Bouguer's,

V 244, XIV. 747. The Interpolation of Egypt, XI. 289; VIII 498; XVI 514—battle of, VIII 474.

in Syria. See Baalbec
Helioscope, XXI 133
Heliostat, in optics, XI 289, IX. 555, n HELIOTROPE, astronomical instrument, XI

289 : IX. 555, n. mineral, XI. 289; IV. 789; XV.

genus of plants, XI 289; V 201. HELIX, in geometry, XI. 289.

genus of mollusks, XV 373. in architecture, XL 289; III 510 Hell, Scandinavian notion of, XV 767 (X. Hommare de), on the Black Sea, TV. 741.

(Father), his dispute with Mesmer, XIV 547; XX 417—his astronomical observations, XIII 159.

HLLLANICUS, historian, XI. 289. HELLANODICAL XI 289.

HELLAS, XI 290, 9, 18 HELLE, in mythology, XI. 290 Hellebore, XI. 290; V. 180—poisonous properties, XIV. 439.

HELLENISMS, XI. 290. Hellenists, XI. 290. HLLLESPONT, XI 290; VII 655. HELLIN, town of Spain, XI. 290

Hellmuth (Dr Julius), his account of a poisonous fish, XII. 381, n. Hellot on dyeing, VIII. 274—his process for dyeing woollen black, 305.
 Hellwig (J. C. L.), his work on insects,

Hellwigia, genus of insects, IX. 192. Helm, weather, and lee-helm, XX. 160. See Rudder.

Helmet, XI. 290-in heraldry, XI. 237. - tun, shell, XV 886. Helminth, mineral, XV. 78. HELMINTHOLOGY, XI. 290.

#### HEL-HEM

HELMONT (Jean Baptiste Van), XI. 308; VII 766; XIV 460; XX. 416. HELMSLEY, in Yorkshine, XL 308 HELMSTEDT, German town, XX 308 HELMUND, river, XI 308; II 202; XX.

Helodus, genus of fossil fishes, XII 340. Heloise, II 26 Helomyza, genus of insects, IX. 255. Helophilus, genus of insects, IX. 241. Helophorus, genus of insects, IX 116. Helopu, tribe of insects, IX 132 Helops, genus of insects, IX. 132 Heloptilus, genus of insects, IX 163 Helos, in Laconia, XI 308—plain of, XIII.

Helostoma, genus of fishes, XII 290 Helotes, genus of fishes, XII 277 HELOTS, Spartan slaves, XI 308—1 evolt of, XX 501

HELSINGFORS, Russian town, XI 309; IX. 585—university of, XXI 492 HELSTONE, town in Cornwall, XI 309 HELVELLYN, mountain in Cumberland, XI 309-VII 576, XVII. 643; XXI. 842

Helvetia, XX 883 Helvetic republic, XX 886 HELVETH, XI 309, XX 883

HELVETIUS (Claude-Adrien), XI 309-his extension to metaphysical subjects of Leibnitz's law of continuity, I. 135-on the origin of our knowledge, 178, 179 -causes of the inferiority of the souls of brutes, 179—on the modifications of genus, 185—on memory, IV 778 his literary obligations to Diderot, VIII. 15

Helvine, mineral, XV. 85 HELVOETSLIUS, town in Holland, XI 310 HEMANS (Mrs), XI 310—poetry of, XVIII.

HEMATINE, dye stuff, XI. 311; VIII. 287,

Hematite, VI. 489 See Hæmatite. Hematrophic organs, III 63 - in the lower animals, 112

Hemel-Hempstead, in Hertford, XI 311 Hemerobaptists, XI, 311 Hemerobini, insects, IX 178 Hemerobius, genus of insects, IX 178 Hemerocoetes, genus of fishes, XII. 273 Hemerodromi, XI 311, VII 467. Hemerodromia, genus of insects, IX 236 HEMI, verbal affix, XI 311.

Remiaster, fossil echinoidea, XVII. 100. Hemicardium, genus of mollusks, XV 349.

Hemicidaris, fossil echinoidea, XVII. 99, 100,

Hemidactyli, reptiles, XIX. 36 Hemigaleus, genus of fishes, XII 327. Hemiglyph, in architecture, III. 510 Hemihedric ciystals, XV. 41 Hemilepidotus, genus of fishes, XII 282. Hemimorphism in crystals, XV 49. HEMINGFORD (Walter), XL 311. Hemiodon, genus of fishes, XII 263 Hemiodus, genus of fishes, XII 246 Hemipalma, genus of buds, XVI 804. Hemiplega, XVII 700 Hemipneustes, fossil echinoidea, XVII. 99,

100. Hemipristis, genus of fossil fishes, XII. 341, XVII 118, 119

Hemipters, order of insects, IX. 25, 160. Heminamphus, genus of fishes, XII. 261. Hemirhipus, genus of insects, IX, 106. Hemirhynchus, genus of fossil fishes, XII.

Hemiscyllium, genus of fishes, XIL 323, 209, 221, 222.

Hemispheres, X. 480; XVI. 7-magnetic, XVÎI 617.

Hemithylacus, genus of fishes, XII 315. 

Hemman (M1), his anchor, III. 118 Hemmer (J. J.), on the electricity of the human body, VIII 571.

(J. J. B.), his work on insects, IX.

HEMP, XI. 311; V. 206; II. 333-as an

HEN-HEN

anæsthetic, VI. 632-culture of, in Canada, 147—smoked in India, XI 454; and Egypt, VIII 431, 448—imports of, 734-in France, X 254-for the navy, XVI. 100-in 10pe-making, XIX. 401hackling of, 403—intoxicating liquor from, XX 804 See Hashcesh, Flax. Hemp, Manilla, V. 211; XI 313, XXI 782.

 order of plants, V 206. Hempel's filter, IX. 582 Hemprich (F. S), his work on insects,

Hempstead eocene rocks, XV. 211, 213 Hems, or Homs, Syrian city, XI. 313 Hemault (Charles-Jean-François), XI 313 -his character of Mazarin, XIV. 374

on the degradation of the coin, AV 435. n 1

HENBANE, XI 314; V. 202-its effect on the pupil of the eye, III. 44.

Hencke (M), planets discovered by, IV. 91.

Hendenbergite, mineral, XV 81 Henderson (Ebenezei), on mud-volcano in Iceland, XII. 262

 (Thomas), his birth and character, I 863—his appointment to the Cape of Good Hope Observatory, 864—his discovery of the parallax of a star, ib , IV. 96-his appointment to the Edinburgh Observatory, III. 818-his astionomical labours, ib

Hendricks (F.), on insurance, XIL 393 et seq

HENERY ISLE, XI 314. Henfrey (Prof.), on test-objects for the microscope, XIV. 804

HENG-KIANG, river in China, XI 314 HENG-TCHOU, Chinese city, XI 314 HENGIST, XI 314, V. 381—ships of, XX.

118.

Hengstenberg, on the book of Hosea, XI. 761—Isaiah, XII. 626
Henia (Baion d'), on animal magnetism, XX. 426.

Hemochus, genus of fishes, XII 300, 302. Henle (J), his system of anatomy, H 769—on blood-globules, 780—on tissues. 786-on the arteries, 789, 790-on the capillanes, 798-on the helicine arteries, 801-on the nerves, 809, 810

HENLEY-IN-ARDEN, IN Walwickshile, XI. 314

HENLEY-ON-THAMES, in Oxfordshire, XI.

Henley's electrical discharging instrument, VIII. 611-his quadrant electrometer, 619-Henley and Foster's magnetic telegraph, XXI. 107 IIFNNA, XI. 314, V. 191; VIII. 431.

Hennah (Mr), his photographic process, XVII. 547.

Hennebone, French town, X. 17. Hennessoorf, in Saxony, XI. 314. Hennessy (Prof.), on metamorphic rocks, XV. 151.

Henops, genus of insects, IX. 236. HENOTICUM, edict of Zeno, XI. 314
Henri's attempt on the life of Louis Philippe, X. 224

Henrietta (Queen), V. 388, 391. Henriot, X. 90 et seg. Henriquillo, lake in Hayti, XI. 254.

HENRY L, of England, AI 314-1eign of, VIII 669-his death and character, 670.

- II, XI 314-proceedings between him and Becket, IV. 562-his residence in Dublin, VIII 217-hus reign, 671death, 674—duelling in his reign, 230—his invasion of Ireland, XII, 468

III , XI. 314—league of the balons against, VII. 529—reign of, VIII. 678—character of, 680—his conduct towards the Irish, XII. 469; towards the Jews, 779—his intrigues with Scotland, XIX. 754-the Forest Charter confirmed by, XX. 210—his encouragement of the university of Oxford, XXI 458—his public instruments relative to Cambridge University, 460, 461.

IV., XI. 314 reign of, VIII 686

#### HEP-HEP

—act regarding the comage, VII 77—duelling under, VIII. 231—his fleet, XX 122

HENRY V, XI. 314-reign of, VIII 687his invasion of France, X. 22—death and character, VIII, 688—law regard-ing wool bought by foleigners, VII 77—letter of, XVI. 90—his navy, ib;

XX. 122.

VI., XI. 314—reign of, VIII. 688—act regarding bulhon, VII. 77—act permitting exportation of corn, 374-mints in his reign, 78—his patronage of fiee-masons, XIV. 398—navy in the reign of, XVI 90, 91.

VII, XI. 314—leign of, VIII 694—character, 697—Bacon and Hume's eulogy on the laws of, I. 37—his tomb, 449-archery in his leign, 425 -anecdote regarding, and the earl of Oxford, XIII 524—chapel of, 671—navy, XVI 91—mints in his reign, VII. 73—shipping of England in his reign, XX. 124, 125-university of Oxford, XXL 454

VIII., XI 314—his marriage to Anne Boleyn, III 217, VII 482-archery in his reign, III 425, 427—the com debased by, VII. 72, 77—distress thus occasioned 375, n. 1—his treatment of Becket's shrine and remains, IV 562-his divorce from Queen Catherine, VIL 480-482 - subsequent marriages 482-religious persecutions, 1b -his title of Defender of the Faith, 694history of his reign, VIII 697-his character, 706—his Irish policy, XII 474—his household, XI 773—dock-yards first erected by, VIII. 78 85—his book against Luther, XIII. 729—masquerades introduced in his reign, XIV 339-his intimacy with Sii Thomas More, XV. 583-his navy, XVL 91-post-office under, XVIII. 403-his share in the Reformation, 824, 828—his wais with Scotland, XIX. 765 et seq.—shipping in his reign, XX.126—Oxford University, XXI.

I. of France, XI 314, X. 12.

II of France, XI 314; X. 31killed at a tournament, VIII. 230 - III. of France, XI. 314; X. 33.

IV. of France, XI. 314—reign of, X. 33—his edicts against duelling, VIII. 231-his beard, IV 528-George Carew's account of him and his court, VI 236-Paris embellished by, XVII 278.

IV. of Castille, XX. 464

V. of Germany, his quarrels with Pope Gregory VII., XI. 50—his attacks on Rome, XIX. 365. V. of Germany, XII. 645.

- VIL of Germany, X. 579; XII 649. Prince of Wales, son of James I. V. 386

(Dr), on the qualities of different kinds of salt, XIX. 585. (Joseph), his galvanic battery, XXI.

617—his reciprocating apparatus, 641.
— (MATTHEW), XI. 315.

of Huntingdon, XI 314. (Patrick), on Washington, XXI 748.

(ROBERT, D.D.), XL 315-on the introduction of coinage into Britain, VII 69—last volume of his history completed by Malcolm Laing, XIII. 158

- (Tho.), his experiments on bleaching, IV. 759, 760.

Di William), XI. 315—on oil-gas X. 427-429—his electro-magnet, XIV. 75—on the decomposing effects of voltaic electricity, XXI. 628. - (Dr Wm Charles), his notice of Dr

Wm. Henry, XI. 316 HENRYSON (Robert), Scottish poet, XI 316;

XVIII. 120

Henwood (W. J.), his account of Cornish lodes, XV. 219

(Mr), on pitching and scending in ships, XX. 160.

Hepatite, mineral, XV. 95 Repatrc pyrites, XV. 115

# HEP-HER

Hepatic duct, III. 62 See Liver. Hepaticæ, nat order of plants, V. 217-reproductive organs of, 145 Hepburn (Arch ), on storing turnips, II 318

\_\_\_ (John), St Leonard's College founded by, XXI 473 HEPHESTEA, XI 317. See Lampadeph-

HEPMÆSTION, XI 317.

- general of Alexander the Great, XIII 771.

HEPHÆSTUS, one of the names of Vulcan, XI 317

Hepialites, IX 211 Hepialus, genus of insects, IX 211 HEPPENHEIM, XI 317

HEPTAGON, in geometry, XI 317. Heptanchus, genus of fishes, XII. 324 HEPTANCHY, XI. 317—Saxon, VIII. 656 mints under the, VII 70

Heptatrema, genus of fishes, XII 227, 228

Hepu-her, Egyptian deity, VIII. 439 HERA, XI 317 See Juno Heraclea, city of Magna Græcia, XI 317
—battle of, XIX. 305, XXI. 22
——city of Sicily, XI. 317.

- PONTICA, in Bithynia, XI. 317 HERACLEONITES, Gnostic sect, XI 317. HERACLIDÆ, XI 317, XIII 747.

HERACLIDES (Ponticus), XI 318 HERACLITUS, philosopher, XL 318; XVII. 232-on the souls of animals, III. 309-Socrates' opinions of his writings, XX.

ERACLIUS, emperor, XI 318—Egypt under, VIII. 474—his edict, Ecthesis, XV 501

HERALD, XI. 319 HERALD'S COLLEGE, XL 319, VII. 115.

- COURT, XI 320. HERALDRY, XI. 321-an element of criticism in archæology, III. 422-its symbols well fitted for being represented on stained glass, X 669

Herapath and Cox's method of tanning XIIL 308.

HERAT, XI 342-siege of, by the Peisians, ın 1838; XVII. 442

HERAULT, in France, XL 342. Herbaceous plants, XL 749; V. 78 Herbage crops, II. 322.

Herbart, his system of philosophy, XIV 609

HERBELOT (Barthelemi d'), XI 342 Heibert (Colonel), on the Himalayas, XI 439.

— (EDWARD), Lord Herbert of Cherbury, XI 342; VI 603—ancedote of, 626-his deistical works, VII 701. (GEORGE), XI 343.

(Sir Thomas), XI. 344. Herbivorous animals, their disposition and organisation, III. 172-seldom pair, 181 season of their parturation, 182-her-

bivorous cetaceæ, XIV 216. Herbois (Collot d'), X. 71. Herbst (J. F. W.), his works on insects,

IX 10. Hercen on the Crusades, VII 527. HERCULANEUM, XI. 344; III. 445, 456-

theatre of, 470-Sir H. Davy's attempts to unrol the papyri found at, VII. 672, XV. 782—glass utensils found at, X. 658—academy of, II 70—frescoes and papyri found at, XV 781; XVII. 265

HERCULES, XI. 346 — proportions of the statue of, VIII. 172—his wars with Antæus, XIV. 360-labours of, XV. 766. a machine, III 120.

constellation, IV. 79

——— (PILLARS OF), XI. 347; X. 618. HERCYNIA SILVA, XI. 347 See Harz. HERDER (J Gottfried Von), XL 347, 544 -on poetry, XVIII. 99, 109.

Herderite, mmeral, XV. 94. Herdwick's breed of sheep, IL 347; VII.

Hereditary predisposition to insanity, XIV. 535 - monstrosities, XV. 503 - transmission of diseases, qualities, &c., in the horse, XI. 636 ei seg.
HEREFORD, English city, XI. 348.

# HER—HER

HEREFORDSHIRE, XI. 349—cattle of, II 340, 341—old red sandstone of, XV. -population and value of property, VIII 754-wool of, XXI 910

HERENCIA, Spanish town, XI. 350 HERESY, XI. 350—capital punishment of, approved of by Cranmer, VII 483-

pretext on what secular power is called on to suppress, I 538
Heretic and heretical, I 528, 529—proper

meaning of the words, 529, n. HERETOCH, XI 351 Hereward, VIII, 668

HERFORD, or Hervorden, Prussian city.

Heriades, genus of insects, XI 199 Heriot, in law, XI 351, VII 355

Heriot's Hospital, VIII 401.
—— birthplace, XI 178 HERISAU, Swiss town, XI 351 Henssant on cartilages, II 765, 831 Hermanfton X. 4.

HERMANN (J. Jakob Gottfried), XI 351; XVII. 525-his opinion of Gilbert Wakefield, VII 586, n. 7

of Pavia, on the doctrine Conservatio virium vivarum, VIII. 354 - on the electricity of the atmo-

sphere, VIII 580 HERMANNSTADT, in Hungary, XI 352. Hermanus, or Armenius, X. 575. HERMAPHRODITE, XL 352; III 171; XIV

426; XVII. 683—cephalous mollusks, XV. 358—annelides, XI 291, 305 flowers, V 125.

HERMAS, one of the fathers, XI 352; IX.

HERMENEUTICS, XI 352-foundation of the modern school of, XVII 520 Hermes, and Hermes, XI 352; XIV. 541; I 457. See Mercurius.

(Egyptian), Trismegistus, or Thoth, XV. 760, 765; XI 883; VIII. 487. HERMETICAL SEALING, XI. 352. HERMIANI, heretics, XI. 352

Hermias, III 570. - (C Cæcilius), signet of, XVIII. 521 Hermina, genus of insects, IX. 217. HERMIT, XI 352

—— crabs, VII. 542. Hermitage (The), in Petersburg, XVII

wine, XXI 883, 889, 512. Hermodorus, VI 740. HERMOGENES, painter, XI 352

- Roman lawyer, VI. 742. - Tarsensis, XI 352

Hermon (Mount), XI. 352; XVII 183, 644, XX 901, 903, 906—supposed scene of the Transfiguration, XXI. 325 Hermoneura, genus of insects, IX. 233. Hermonthis, ruins of, VIII. 513 HERMOPOLIS MAGNA, XI. 352; VIII. 504. HERMUS, river, XI. 353

Hernandez on birds, XVI 725. HERNE BAY, village in Kent, XI. 353.

HERNIA, XI. 353; II. 766—suigical treatment of, XX. 830—in cattle, XXI.

Hernici, ancient Italian tribe, XI. 353 Hernosand, m Sweden, XI 354; XX.

Hero, priestess, XI 354.

and heroic age, XI. 354—plays of heioic age, VIII. 161—defication of heroes, XV. 766, I. 458

mathematician, his thermometer, IV. 456-his hydrodynamical inventions, XII. 69—his fountain, XVIII 28; applied to the raising of water from a mine, 86—his modes of showing the effects of steam, XX. 573. - the younger, X. 502.

HEROD THE GREAT, XL 854, XII 733, 771 et seg.; XVII 194—his temple at Jerusalem, XII. 742 - AGRIPPA, XI. 355; II. 421; XVII.

- ANTIPAS, XI. 355; III. 275; XII.

HERODIANS, Jewish sect, XI 355. HERODIANUS, XI. 855—Poliziano's version of, XVII. 522.

# HER-HER

HERODOTUS, XI. 355-on the battle of Marathon, IV. 199, n 1-on the Amazons, II. 650-on Babylon, XIX 846; IV. 340, 346-on India, III 752-on places whence the ancients obtained gold, XV 230-on embalming, VIII. 643-on Egyptian divinities, 435-his fidelity as a historian, XI 368, n 1—on the people of Egypt, 371, n 6—on the age of Homer, 596-on Egyptian writing, 377—on Egypt, VIII. 420—his account of Cyrus, VII. 612—on the Pelasgi, XVII 370—his allusion to Nineveh, XVI 273-on Syria, XX 901 -on the Phœnicians, 905

Herold (F), his works on insects, IX 18 HERON, bird, XI. 357; XVI. 798

- mathematician, XI 356-Egyptian king, 388

the younger, XI 356

Herophilus, his anatomical knowledge, IL 751, XIV. 452-his skill in suigery, XX 811.

Herpestes, genus of mammalia, XIV. 166. Herpestreng (Henrick), XIX. 692 Herpetodryas, genus of reptiles, XIX 57. Herpetoichthys, genus of fishes, XII 232. Herpetology, XI 357. See Repthla Heriengrund, mines of, XVI 155

Hernera, the elder, teacher of Velasquez, XXI 533

(FERDINAND DE), Spanish poet, XI 357—poetry of, XVIII 114 (General), president of Mexico,

XIV. 714.

- Tordesillas (Antonio de), Spanish historian, XI. 357.

Herrerite, mineral, XV 100 Herrich-Schaeffer (G A W), his works on insects, IX 21.

HERRICK (Robert), English poet, XI 357, XVIIL 122

HERRING, XI. 858; XII. 285-quantity cured and exported from Britain, in 1851, VIII. 727 — quantity exported, from 1810 to 1854, IX. 640—as an article of food, 635, 763-different kinds of, 635-gutting, 638-titals of the ments of the British and Dutch, 689quantity cuied at different places in Scotland, 640-foreign duties on, 641, n 2-smoking of, 643-in the Caspian sea, VI 312—expediency of abolishing the brand on, XIV 289—oil from, XVI 494-red, IX. 643-migrations of, XVII. 828

Herring-fishery, in the Baltic, IV. 404—Britain, IX 635—Caithness, VI. 62; IX. 635-Donegal, VIII 105-in Holland, XI. 583-England, VIII. 727-Ireland, IX. 633—Scotland, 635, XIX 804—number of boats, amount of tonnage, men employed, &c., in Scotch herring-fishery m 1854, IX. 642 See Fisheries.

Herring-salmons, XII 243. HERRNHUT, town in Saxony, XI 358; IV.

Herrnhüters, XI. 358; XXL 971. See Bohemian Brethren Herschel (Sir J F W.), I. 861—notation

of differentials introduced at Cambridge by, 807-on aurora borealis, IV 250on the cause of the rolling of thunder, VIII 583—his actinometer, II 118—on Schumacher's astronomical work, III. 814-on the magnitudes of stars, IV. 95-on the pyramids of Egypt, VIII. 500, n—on nebulæ, IV. 85—on M. Plana's analysis, I 826—his astro-nomical career, 861—his observations at the Cape of Good Hope, 862-his high character, ib,—on the orbits of double stars, ib—on the brightness of stars, 1b -on variable stars, ib.-his treatise on light, 917-on magnetism, XIV. 10, 32, 33, 35-his doublet microscopes, 773, 774—his optical discoveries, XVI. 545, 561, 572, 578 et seq —on the spectrum, 591, 594, 595—master of the mint, VII. 82-his report on the mint, 83-on planetary machines, XVII. 758-coloured image of the solar spectrum by means of photography obtained by, 552.

#### HER—HEU

HERSCHEL (Sir William), XI 358—sketch of his life and works, I. 838—his astronomical discoveries, 788, 840 et seq; III. 807, IV. 72—sidereal astronomy founded by, I 800, 839—as an optician, 839—his improvements in telescopes. 1b -on the solar spots and atmosphere, IV 30—on the planets, I. 840—Saturn and his ring, IV. 71, 72, I. 840—Mars, IV 66—on the fixed stars, 81, 82, 84, I 841-on double stars, ib; IV. on nebulæ and the nebular hypothesis, I S42, S43; IV S5, S6—on the constitution of the starry heavens, and the milky way, I 843 et seq — his "gauges" 844—determines the direction of the motion of the solar system in space, 846-summary of his discoveries, ib -his character and death, 847-on the spectrum, 752, 846, 954; XI. 263; XIII 452—his micrometers, XIV 753, 757—on the transmission of heat through glass, I 951-on optics, XVI 535, 592—his telescopes, XXI. 128—— (Caroline Lucretia), I. 857, n

and South's catalogue of stars, IV. 95.

Herschelite, mineral, XV, 77 HERSFELD, in Hesse-Cassel, XI 358. HERSTAT, in the Netherlands, XI 358 HERTFORD, XI. 358-savings-bank at, XIX. 657.

- (Earl of), his invasion of Scotland, XIX. 777

HERTFORDSHIRE, XI. 358—population and value of property, VIII 754.
HERTHA, or Herthus, German deity, XI. 360; I. 457.

HERULI, XI 360

Hervart's tables of the powers and pro-ducts of numbers, I. 706 Hervas, philology advanced by, XVII 528.

HERVEY (James), XI 360 — (John), lord, XI 360. — islands, XVIII 278.

Herz (Henrik), Danish poet, XIX. 695 Hesaiorad, Turkish town, XVIII 807. Hrsiodos, Hesiod, XI. 361—poems of, XVIII. 101.

Hesione, genus of annelides, XI 299. Hesperi-sphinges, insects, IX. 209. Hesperia, genus of insects, IX. 209. HESPERIDES, nymphs, XI. 361.

HESSE, country of Germany, XI. 361 Cassel, or Kur-Hessen, XI 362—coins of, XV 444—university in, XXI 492—weights and measures, 811

- DARMSTADT, XI. 362-university in, XXI 492—weights and measures, 811. HESSE-HOMBURG, XI 363. Hessite, mineral, XV. 118.

Hessonite, XV. 85. Hesychius, lexicographer, XI. 363.

Egyptian bishop, his recension of the New Testament text, XIX. 835, 836 Hetama, secret Greek association, XI 23. Heterobranchia, order of crustacea, VIL

Heterobranchus, genus of fishes, XII. 263. Heterocercal fishes, XII. 209, 333, XVII. 120, 640

Heterocerus, genus of insects, IX, 116 Heterodon, genus of reptiles, XIX. 55. Heterodontes, in zoology, XIV. 229 Heterognathodon, genus of fishes, XII.

Heterogyna, family of insects, IX. 193 Heteromera, section of insects, IX. 128. Heteromyza, genus of insects, IX. 255 Heteroneura, genus of insects, IX. 256 Heteropoda, group of crustacea, VIL 541.

genus of birds, XVI. 804 order of mollusks, XV. 875. Heteroptera, division of insects, IX. 161. Heteropygu, family of fishes, XII. 286. Heteroscii, X. 485. Heterotarsus, genus of insects, IX. 131.

Heterotis, genus of fishes, XII. 250. Heterozite, mineral, XV. 101. HETMAN, XL 368; VII 428.

HETTOWRA, town of Hindustan, XI. 363 Heulandite, mineral, XV. 76. Heusinger on the teeth, XVI. 419.

# HEV-HIE

HEVELIUS (John), XL 363-opposed the application of the telescope to astronomical instruments, I 613—his astrono-mical labours, III 802—constellations added by, IV. 80-his catalogue of stars, 1b—on the cometary orbits, VII. 167.

Hewet (Andrew), VII. 482
Hewritson (C. W.), his contributions to entomology, IX. 21.
Hewson (William), on the lymphatics, II.

766, 803, 804—on the villi of the ileum, III 61.

Hexagon, X. 507, 550, 551.

Hexagonal system of crystallisation, XV. 45-twin crystals in, 52

Hexahedron in mineralogy, XV. 41 HEXAMETER, XI 363.

HEXARCHE, 2500.

HEXARCHA, XI. 364, IV 700—Ongen's, XVI 715; XVIII 266; XIX 840.

HEXARCHA, SI. 364, IV 700—Ongen's, XVII 715; XVIII 168.

HEXASTYLE, in architecture, XL 364; III

Hexatoma, genus of insects, IX. 232 HEXHAM, in Northumberland, XI. 364; XVI 300-battle of, VIII 691 Hexodon, genus of insects, IX. 123

Heydenreich, his works on insects. IX. 23. HEYLIN (Peter, D.D.), XI 364

HEYNE (Christian Gottlob), XI 364-philology promoted by, XVII 524—his quar-rel with Voss, XXI 672—his improvement of the library at Gottingen, XIII

on diamonds, VIII. 2, 3 Heysham (Dr) parish registers kept by, XV 605.

HEYWOOD (John), epigrammatist, XI 366. \_\_\_\_ (James), on the Lancashire coal-fields, XIII. 178

(Mrs), novels of, XIX. 270.

(THOMAS), dramatist, XI 366 (Thomas), his description of the first English three-decker, XVI. 92;

Hezekiah, his improvement of Jerusalem XII. 731-seems to have had no idea of a future state, I. 474, n. 2.

Hezronita (John), his translation of Edrisi's Geography, VIII. 411

Hibbert (Dr), on apparitions, III 316—on vitrified forts, IX 792—on the boulders of Shetland, VIL 723.

HICKES (George), XL 366-on the philo logy of the Teutonic languages, XVII.

Hickory-tree, V 208-bark used in dyeing, VIII 297-nut, XVI. 395. Hicks (Elias), quaker, XVIII 721. HIDAGE, XL 367.

HIDALGO, XL 367

—— (Don Miguel), his proceedings in Mexico, XIV 708—his execution, 709 Hides, currying of, VII. 595—imports of, VIII. 731, 734, XIII. 311—exports of,

1b. See Leather. HIDJELLEE, in Hindustan, XI. 367. Hiempsal, XVI 350.

Hiendelencina silver mines, XV. 234.

Hieratic system of writing, XI. 369, 370; VIII. 441.

HIERAX, bishop, XI. 367. Hieres, islands. See Hyeres. Hiero I. and II., kings of Syracuse, XI

367 See Hieron HIEROCLES, of Alatanda, XI. 367. of Alexandria, XI. 367.

of Bithynia, XI. 867. HIEROGLYPHICS, Egyptian, XI. 368; II. 606; VIII. 441—Young's interpretation of, I. 900—Sir William Drummond on, VIII. 195, 196—deciphering of, XVII. 534—directions in which they are watten, V. 10-effect of, on mythology, XV. 759.

of Palenque and Copau, &c., II. 697-Mexican, 684.

HIEROMANOY, XI. 482. Ilieron, or Hiero I, tyrant of Syracuse, XI. 432; XX. 899.

#### HIE—HIM

HIERON II, king of Syracuse, XI. 432; VL 287, XX. 900.

Hieronymo (Fabricio), anatomist, II 760. HIERONYMUS, king of Syracuse, XI 432 HIERRO, island, XI 432, VI. 167—fountain-tree of, X. 845

Higden (Ralph), XI. 432. Higgins (Godfrey), on the Pelasgi, III

- (William), on chemical combins-

tion, L 937. High, different meanings of the word. VIII. 10.

- School, Edinburgh, VIII. 400 High-pressure steam-engine. See Steamengine.

HIGHAM-FERRARS, town in Northamptonshire, XI. 432.

Highblower, diseased horse, XXI 571. HIGHGATE, in Middlesex, XI. 432.

Highland and Agricultural Society of Scotland, II. 265; VIII. 398—statistics

collected by, XIX. 796, 797
Highlands of Scotland, XIX. 792—ponies,
II 338—cattle, 342—pigs, 355—sheepfarming in, 350-emigration from, VIII 651—second sight in, III. 318, n 1—favourable for rearing bees, IV 587 measures for tranquillising, after the

Rebellion of 1745, V 462—state of, in the reign of James IV, XIX. 764— Highland roads and bridges, 807. Highmore on the lactcals, II 761.

HIGHNESS, title, XI. 432; XXI 291 Highton's telegraphic system, XXI. 100,

· (E.), his description of telegraphic instruments, XXI 103—on Bain's transmitting apparatus, 107

(Rev. H), his telegraphic instru-ments, XXL 103.

HIGHWAYS, XI. 432 See Road-making Highworth, town in Wiltshire, XI 483 Hilaire (Geoffroy de St), on the torpedo, VIII 573-his work on insects, IX. 15 on Linnæus' classification of animals, XIV. 127—on the mole, 152—on the teeth of the rodents, XVI 454 and n 2.

Hılara, genus of insects, IX. 235 HILARIA, Roman festival, XI 433 HILARY, bishop of Arles, XI. 433-Athanasian creed ascribed to, IV. 158

- the deacon, XI. 433.

· (St), bishop of Poictiers, XI 433. TERM, XL 433; at Oxford, XXL 458

Hildanus (Fabricius), on surgery, XX. 818. HILDBURGHAUSEN, XI. 434. Hildebrand (Prof.), on the electric spark,

VIII. 544. - See Gregory VII.

HILDESHEIM. in Hanover, XI 434, 211. HILL (Aaron), XL 434.

(David), on the ryot-war settle-ment in India, XI. 526

—— (Frederick), his report on Scotch prisons, XVIII. 570. (John), his work on insects, IX. 4

(Sir JOHN), XI 435

—— (M.D.), on the treatment of released criminals, XVIII, 209. - (Principal), of St Andrews, XI. 434

on ordination, XVI. 704-on theology, XXI 198.

(Rev. Rowland), XI. 435. (Rowland), Lord, XI. 435.

(Rowland), his pamphlet on postoffice reform, XVIII. 409 - on the postal statistics of 1837, 410-his uniform penny postage adopted, 411; V. 667; XXL 67-results of, XVIII 412appointed secretary to the post-office,

Hill's method of purifying gas, X. 418. HILLAH, XI. 436; IV. 431, 432 et seq.; IX. 376

HILEL (Rabbi), XI. 436. Hilton Castle, VIII. 267. Hilum, in botany, V. 133. Himæra, site of, XX. 243.

Himalaya, steam troopship, description of, XX. 665.

# HIM-HIP

XVI 141, 143, XVIL 598-heights of, 643 — sub-Himalayan flora, V. 228; XVII 628 — Moorcroft on, XL 447— Fraser on, 1b, 448-Elphinstone on, 448—Captain Raper on, ib—glaciers of, X. 634—snow-line on, XIV 660 cultivation of tea among the, XXI 81—vegetation of, V. 226—vulture of,

Himantopterus, fossils, XVII 101 Humantopus, genus of birds, XVI 805 HIMERA, Sicthan city, XI. 445; VI 281, 282—coms of, XVI. 366.

 rivers, XI. 445. 

Hims, battle of, VIII 495 Himyaric inscriptions, XVII 534
Himography, in Leicester, XI. 445—popula-

tion, XIII. 321. Hincks (Dr), XL 369, 409; XVII 263,

Hind (Mr), I 859-his success in the discovery of small planets, 859, IV 91—his discovery of comets, I 859; IV. 95

HINDIA, in Hindustan, XI 445 Hindmarsh (Captain), governor of South Australia, IV 293, 294

Hinds, in Berwickshire, IV. 680; Rox-

burghshire, XIX. 455. Hindsham, island, III 140

HINDU COOSE, XI. 445; IL 201; XVII

598, 643. Hindus, XI. 473—Arabian algebra pro-bably derived from the, II. 483—their writers on that science, 487—their mathematical knowledge, ib.; X. 503 architecture, III. 459, 434, 514, XI. 477—invented the denary numerals, III. 580-their character, 749, XI. 473astronomy, III 785—geometry, X. 503
—various races of, XI 463—Baumans,
IV. 414—Batneaus on Bathes, 508—Bazeegurs, 525-Bengalı, 651-Bhecls, 693 —Brahmuns, V 266—castes, 267; VI 314, 315, XI 471, XIV. 104—difference from the Chinese, VI. 558—fakirs, IX. 472—medical profession among, XIV. 450-mythology, VII. 718, XV. 761, 762 -traditions relating to the Deluge, 761 -laws, XL 476-languages, XIII 207calendar, VI. 853-supposed inventors of chess, 537—Jams, XII. 670—Jants, 707—of Malabar, XIV. 104—land triles among, XI 512—trial by ordeal among, XVI 701-college, at Calcutta, XI. 531-Sir William Jones' service to the literature of, XIII. 4-their doctrine of the metempsychosis, XIV. 628—their pantheistic system, XVII. 229, 280-their theistic system, 229, 280—their practice of burying money, XVIII. 471 their belief in a future state, I. 463doctrine of transmigration as held by, ib.—in Sindh, XX. 305—their Vedas, or sacred books, XXI. 531. See Buddha, Shaster, Beels, Brahmins, &c.

HINDUSTAN, XI. 446. See India. Hindustanee language, XIII. 199, 207. Hinge, XL 532; XII. 813—in bivalve shells, XV. 842.

Hinging of doors, XII. 813 Hinglaj, place of Hindu pilgrimage, IV. 641

Hinnè, VIII. 431. See Henna Hinnites, fossil mollusks, XVII. 106. HINNOM, XL 532; X. 445; XIL 786. HINOJOSA DEL DUGUE, Spanish town, XL

Hıntza, Kafrarian chief, XIII 34. Hinzuan, ısland, XII 789 Hip, muscles of the, III 38. Hip-joint, III. 36—sprain of, in cattle, XXI 560.

Hippahmus, fossil sponges, XVII. 93. HIPPARCHUS, XL 532-his contributions to astronomy, L 598; III 790, 791—on geography, X 465.

and HIPPIAS, XL 532, 229; IV. 197, 198,

Hippobosca, genus of msects, IX. 258. MOUNTAINS, XI. 486, 447; III. 731; Hippocampinee, family of fishes, XII. 315.

# HIP-HIT

Hippocampus, in anatomy, III 53. genus of fishes, XII. 315. Hippocastaneze, family of plants, V. 186. Hippocrateaceæ, nat. order of plants, V. 186.

HIPPOCRATES, XI. 532; XIV. 451-not distinguished as an anatomist, II 749works erroneously ascribed to, 1bon bathing, IV 503, 504-Boerhaave's admiration of, 806-his surgical skill, XX. 810—his candour, 812, n. 2

- of Chios, mathematician, X. 498 Lune of, XX. 520 Hippocratic writings, II. 749; XIV. 451 Hippocrates, XI. 534, 288 Hippodrome, XI. 534, VI. 738.

Hippoglossus, genus of fishes, XII. 272, IX. 648, 764 HIPPOGRYPH, XI. 534

HIPPOLYTE (St), French town, XI 534. HIPPOLYTUS, XI 534; IX. 492 HIPPONAX, Greek satırıst, XI. 534 Hippopodium, fossil mollusks, XVII. 108 HIPPOPOTAMUS, XL. 535; XIV. 196, IL. 217—dentation of, XVI 469—stomach, III 108—cranium of, 77—in Egypt, VIII. 432—its ivory, III. 105, XII. 664—leather from the skins of, XIII. 305-fossil, XVII. 168, 169, 638. Hippopus, genus of mollusks, XV. 349 Hippuric acid, VL 512

Hippuris, or Mare's-tail, order of plants, V 192

Hippurites, fossil mollusks, XVII. 107. Hippuritidæ, family of mollusks, XV. 349 -fossil, XVII 107.

Hiram, king of Tyre, XXI. 405. Hirat. See Herat.

Hire (Philippe de la), XI 595—on magic squares, XIII 811—on dialling, VII 776-on micrometers, XIV 745-on the projection of the sphere, X. 491. Hiring by time, and by piece-work, XXI

Hirling, XIL 240. Hirpini, people of ancient Italy, XI. 535 Hirsohberg, Prussian town, XI. 535 Hirudines, family of annelides, XL 303. Hirudo, genus of annelides, XI 303 Hirundo, genus of birds, XVL 757. Hisinger on electro-chemistry, L 968. Hisingerite, mineral, XV. 90 Hispa, genus of insects, IX. 148.

HISPANIA, XI. 535 See Spain. Hispaniola. See Hayti. HISSAR, town in Hindustan, XI. 535sepoy insurrection at, XVI. 309. Hister, genus of insects, IX. 113. Historoides, tribe of insects, IX. 113.

HISTLEA, city of Eubœa, XL 536 Histophorus, genus of fishes, XII. 297,

Histopterus, genus of fishes, XIL 302, 222 Histoteuthis, genus of mollusks, XV 400. Histology, XI 536; XIV 463—histological physiology, XVII. 649. Historian, qualifications of the, V. 692, XI 546 — primeval historians, 548;

classical, ib; mediæval, ib; modern, ib—Niebuhr on the province of, XVI. 262—historic periods in science, I. 799

Historical writing and arrangement, XI 547.

plays, VIII. 145—geography, X. 459painting, III. 717argument for the existence of a God, XXI. 185.

HISTORY, XI 536-academies of, II. 69 its distinction from annals, III. 215obscurity of early, VI. 664-chronicles of the middle ages, VII. 535—Hailes' Annals regarded by Dr Johnson as a new mode of, 634-Herder on, XI -illustration it receives from coins XVI. 351-its relations to philology. XVII. 526, 527.

- (Natural). See Natural History. Histria. See Istria.

Hir, town of Asiatic Turkey, XL 549scenery, IX. 876—its bituminous foun-tains, IV. 736.

Hitchcock (Dr), on fossil foetprints of birds, XVII. 154.

# HIT-HOD

HITCHEN, town in Hertfordshire, XL 549 Hitches, in coal beds, VII 117 HITTITES, XL 549; XVII. 192-their war

with Egypt, VIII. 462 Hive (Jacob), his forgery of the Book of Jasher, XIL 700.

Hives, different kinds of, III 295, 296; IV. 586, 587—preparation of, by bees, 576—their mode of ventilating, 574 temperature of, 1b

HIVITES, XL 549, XVII 192. HOADLEY (Benjamin), bishop, XI 549. HOANGHO, river, XL 549, XVII. 607, 647. Hoard (William), his rope-machine, XIX.

Hoarding, analysis of the principle of, L 382 See Avance

Hoare (Sir R C), on Abruzzo, IL 49. Hoar-frost, VII 765; X. 316; XIV 653 -Dr Wilson on, VII 769

Hobal, Arabian idol, XI 549. Hobart (Lord), governor of Madras, XI.

HOBART-TOWN, XL 549; IV 261; XXI 31—meteorological observations at, XIV.

686. HOBBEMA (Minderhout), XI 549. HOBBES (Thomas), XI. 550—his philoso-

phical, political, and ethical principles, L. 40, 41, 144 n., 332-his Leviathan, 42 -Addison's opinion of his treatise on human nature, 1b—extensive influence of his writings, 1b—his style, 334—his antagonists, 43, 339; VII 579, n. 3— Butler's answer to his opinion as to the origin of the affections, I 298-coincidence between his followers and the Antinomians, 41-on the comparative advantages of reading and thinking, 45 -his leading principles traced by Cudworth to the remains of the ancient sceptics, ib -on the law of nations, 90, n. 1-on the origin of our knowledge, 114-his definition of liberty, 268-his early studies and works, 333—his arrogance and dogmatism, 241, 333, 334 does not distinguish between thought and feeling, 336-neither the social affections nor moral sentiments to be found in his system, 338-his low estimate of human nature agreeable to the court of Charles II, 1b .- anecdote regarding his Leviathan, 241—Clarendon's opinion of him, 242—on logic, XIII -on association of ideas, XIV. 596 on right and wrong, XV 541-theory of rectitude ascribed to, 548-Clarendon's work on, XII. 67-on the source of wealth, XVIII 225-on the quadrature of the circle, XX. 522.

Hobbs (Mr), his lock, XIII. 537, 545—on locks, 534 et seq — his rudimentary treatise on, 536.

Hobby, bird, XVI 745.

HOBGOBLIN, XI. 551. Hobhouse (Sir John), his travels in Albania, II 444-on the French war with Egypt, XXI. 871-on the insurrection of the janissames, 372.

Hoblers, XI. 551. Hob-nob, XI 551.

Hobson (Capt.), consul in New Zealand, XVI 238.

Hobson's Bay, Port Phillip, XIV. 478. Hoccleve, poetry of, VIII. 796. Hoccos, birds, XVI. 785

HOCHE (Lazare), general, XI. 551, V. 559; X. 104, XII. 498.

Hochhuth (J. H.), his works on insects. IX. 23.

Hochkirk, battle of, XVIII. 654; XXI. 708. Hochst, pottery of, XVIII 436.

Hock (A.), his plan for gilding fibres, XIII 145.

HOCK-DAY, XI. 552. Hockhocking, river, XVI. 489. Hocus-Pocus, XL 551

Hoderda, seaport on the Red Sea, XVIII. 818

Hodges (Mr), on the bad effects of multi-plying cottages, VII. 434. Hodgkin on the Greek alphabet, IL 612

# HOD-HOL

Hodgkin (Dr), on zoophytes, XXL 975,

Hodgkinson (Eaton), on the strength of pillars, I. 876, XX. 178—on the cate-nary curve, I 876—his assistance in erecting the Menai tubular bridge, 877 -on the strength of 1ron, XII. 566 et seq, 591, 592, of iron columns, XX. 780—strength of timber, 171.

Hodgson (Adam), on Indian antiquities,

(Capt), on the sources of the Ganges, X. 634

- (Robert), XV, 661

HODMAN, XI. 552. Hony (Humphry), XI 552. Hoe's printing machine, XVIII. 562. Hoes (horse), IL 275.

Hoesen's burning-mirrors, VI 11 Hæfnagel (D. J), his work on insects, IX. 2.

Hor, town in Bavaria, XI 552 Horer (Andrew), XI. 552 Hoffman (M), on births and deaths in Prussia, XV. 623.

- novelist, XIX. 292. Hoffman's polytypes, XVIII 552 HOFFMANN (E Theodor Wilhelm), XI. 552. - (FREDERICE), XI 553

on the circulation of the san in trees, V. 111. Hoffmanswaldau, poetry of, XVIII 118.

Hoffmeister on the earthworm, XI 301,

on the embryology of plants, V. 153, 156, 157 et seq.

Hofwyl, M Fellenberg's establishment at,

IX. 500; XVII. 477. Hoe, XI. 553; XIV. 197; II. 335; IX. 762—dentition of, XVI. 467—times of appearance of the permanent teeth, 468—nerves of the teeth, 418—fat of, 498—American, II. 713, 714—leather from the skins of, XIII. 305

HOGARTH (William), XI 553; XXI 237his merits as a painter, III. 712, 717; XVII. 79—contours of Greek architectural mouldings conform to his line of beauty, III. 468.

Hoog (James), Ettrick shepherd, XI 555, XXI. 877—poetry of, XVIII 127—his visit to Tannahill, XXI. 19.

Hoggets, II 349. Hogging of a ship, XX. 179, XVI. 97. HOGSHEAD, XL 559

HOGUE (Cape de la), XI 559-battle of, V. 445; XL 578; XIX. 400

Hohenlinder, village in Bavaria, XI 559 —battle of, X. 120; XV. 585, 793 Hohenzollern-hechingen and Hohen-

ZOLLERN SIGMARINGEN, XI 559; XVIII. 662.

Hohenzollern family, XVIII. 647. Holacanthodus, genus of fossil fishes, XVII. 125.

Holacanthus, genus of fossil fishes, XII. 244. Holaster, fossil echinoidea, XVII. 100.

HOLBACH (Paul Thyry, Baron de), XI 559 -his Système de la Nature, L 181, n 3 —his connection with Diderot, VIII 15. HOLBEAGH, in Lincolnshire, XI 559. HOLBEIN (Hans), XI 559—his portrait-

drawings, XIII. 390—woodcuts of the Dance of Death ascribed to, XXI 903 HOLBERG (Baron Ludwig), XI. 560; VII. 750; XIX. 692.

Holcus saccharatus, sugar-bearing plant, XX. 798.

Holectypus, fossil echinoidea, XVII. 100. Holegu-Ilecou-Khan, a patron of astronomy, III. 795

Holepta, genus of insects, IX. 113. Hollbut, fish. See Halibut. Hohness of God, XXL 191 - title, XXI 291.

HOLINSHED (Raphael), XI. 560. HOLKAR, XI. 560, 508 et seq.

HOLLAND, XL 561; IX. 899—proceedings of the Duke of Alva in, II. 642—analysis of the soil of, 894-policy in Am-

# HOL-HOL

boyna and the Banda Islands, 661; IV. 410 — army, III. 653—painters, 711 — discoveries in New Holland, IV. 252 et seq — bleaching, 758—bricks, V. 342-wars with Britain, 415, 417, 422, 426, 495-political movements in 1784, 525invaded by the Duke of Brunswick, 5 6 -invaded by the British in 1799, 568; X. 114-discussions in the British parhament on that expedition, V. 573-colonies, VII 149; in the West Indies, II 708, the Banda islands, IV. 409, Brazıl, V. 282; XI 575, Celebes, VI 360; Ceylon, 396; Guiana, XI. 84—commerce, VII 187; with the East Indies, III. 757; England, VIII 732, 733; Japan, XII. 695, 698, Java, 709-commercial policy, VII. 193 - sources of its commercial prosperity, 197—short credit, 198 -battle of Camperdown, V 561; X. 107; VIII 253-drifting sands, 646, 647fisheries, IX. 639, 648; herrings, 635, 638, 639, 641—conduct of the French towards, X. 39, 42—conquered by them in 1794, V. 554; X. 93, 94—no usury laws, XII. 431-language, XIII 211hbranes, 422—population of, XV. 601, 602—coms, 442, 444; XVI. 389—monarchy, XV 413—education, 818, 828 ınland navigation, XVI. 55-newspapeis, 202-early traffic with New York, 217liberal treatment of foreigners, XIV. 275-learing of florists' flowers in, XI. - scholars of, XVII 524 - early north-east voyages, XVIII 165 -- pottery, 433-Presbyterianism, 488-1ailway statistics, 787-postal system, 424rise of naval power, XX. 130-number of vessels, 138—surgeons, 818—possessions of, in Sumatra, 805, 806—stampdutes first levied in, XXI 65—condition of the lower classes in, 49—consumption of tea m, 91—universities in, 492—weights and measures, 811 — map of, XI Plate. See Belgium

Holland (New) See New Holland - (Dr), on the Ionian islands, XII 444 et seg

- (Dr), on animalcules as the cause of disease, XXI 975.

— (Sir H), on phrenology, XVII. 559
—on mental physiology, XIV. 589, n. 1.
— (Sir John), VI. 619.
— (Lord), VIII 242—on a peace with

France in 1800, V. 570—his opposition to the union with Ireland, 572—his Life of Lope de Vega, VIII 146-on the extravagances of the early drama, ib

(Mr), on the usury-laws, XII. 480 (Mr), Bank of Scotland projected by. XV. 483.

Dy, XV. 486.

(In Prillemon), XI. 592—his translation of Camden, VI. 116; of Livy, XIII 527—extract from his translation of Pilny, XII 271
Hollands. See Gin.

Hollandus (Isaac), on sal-ammoniac, II. 720.

Hollar (Winceslaus), engraver, XI, 592 Holloa, in hunting, XII. 46.

Holly, order of plants, V. 199 - common, V. 199; XVII 759, 760, 762—species used as tea in South America, V. 199 See Maté

Holmes' manure distributor, IL 275.

Holocanthus, genus of fishes, XII. 302, 301. HOLOCAUST, XI. 592

Holocentridæ, family of fishes, XII. 279. Holocentrum, genus of fishes, XII 279fossil, 348.

Holocephali, order of fishes, XII. 318—fossil, XVII 119. Holocystis, fossil corals, XVII. 96, 97.

Holograph, XI 592 Holohedric crystals, XV 41.

Holopea, fossil mollusks, XVII. 110. Holophotal system of lights, XIII. 476—its adaptation to Fresnel's apparatus, 478-

condensers, 479. Holopodius, genus of birds, XVI. 805. Holoptychius, genus of fossil fishes, XIL 886; XVII. 128, 457; XIX. 458.

#### HOL-HOM

Holoptychiidæ, fossil fishes, XVII. 123. Holosteus, genus of fossil fishes, XII 347. Holostomata, fossil mollusks, XVII 110 Holothuria, XXI. 985, 984-fossil, XVII. 100

Holothurida, XXI 986. Holothuridea, XXI 984.

Holothurioidea, XVII 100. Holstein, XL 592, VII. 746—discontent in, after the peace of 1815, 743-invaded by Charles X. of Sweden, XX 852-navaged by the Danes, 853. HOLT (Sir John), XI. 592

in Denbighshire, XL 593; VII. 736

Holwell (Mr), VI 71, XI 484. Holy Alliance, XI 593; II 468, VIII 40; XVIII 657; XIX 495—secession of Great Britain from, V 637

HOLTHEAD, XI. 598—Chester and Holy-head Railway, IX. 664—harbour of refuge at, XI. 221—mail-packets, XX. 666.

HOLY ISLAND, XI 593, XVI 299 - in Lamlash bay, Airan, VI 28 Holy Ghost, blasphemy against, IV 754—office of, L 501; XXI 217—personality of, 1b -effects of his work in man, 218 HOLY-STONE, XI 593

Holyrood, abbey of, VIII. 395, 390-sanctuary of, 395.

HOLYWELL, town in Flintshire, XI 593, IX 664

HOLZMINDEN, town in Brunswick, XI 593

Homacanthus, genus of fossil fishes XVII. 117.

Homaliaceze, nat. order of plants, V. 193 Homalopis, genus of serpents, XIX. 59 Homaluia, genus of insects, IX. 254 Homberg (William), chemist, his aræometer, III, 392.

Homburg See Hesse-Homburg. Home, (Captain), on magnetism, XIV 15, 56

(Sir Everard), XI. 594-on the spleen, II. 802-on the nerves, 808-on the brain, 819—on muscular filaments, 821—on the tongue of the giraffe, III. his work on Comparative Anatomy, II. 113—his appropriation of John Hunter's papers, XII 29—on the Du-gong, XIV. 219—on the vampire bat, XVI. 452.

- (Dr F.), on bleaching, IV. 758. (HENRY), Lord Kames, XI. 593his Elements of Criticism, L. 221—on the "hoarding instinct," 382, n—his mode of improving Blair-Drummond moss, II 362-on the pairing of birds, III 181-on the old Roman law against bankrupts, VI 740—on the recovery of the Pandects, 747—on Lord Stair's Institutes, VII 633, n. 1—his discussion with Dr Doig, VIII. 91—on feudal law in Scotland, IX. 525, n. 10—his friendship towards Smellie, XX. 336-Tytler's

hfe of, XXI 411.

(JOHN), author of Douglas, XI 594; IX. 511—his tragedy of Douglas, VIII. 166; XIX. 230

HOMER, XI. 594—were letters known in his time? III. 617—Alamanni's notes on, II 438-Bryant's opinions concerning, V. 706-Dr Clarke's translation of the Riad, VI. 758-Eustathius' Commentaries on, IX 405—his notices of the Ioman Islands, XII. 451, 454— Foulis' edition of, XV, 526—his description of the horse, XI. 633-his imperfect distinction between morality and law, XIII. 259—criticisms on, XX. 86, n. 1—MS of Iliad, XXI. 589—transla-tions of, into English, V. 678; VII. 473; VI. 416; XI 550; XVIII. 325, 330, 831; French, XII. 685; VI. 615; Italian, 389; XV. 519; Icelandic, XII. 199; German, XX. 708—palimpsest of the Hiad, XVII. 214 fragment of, on papyrus, 265—poetry of, XVIII 92, 95, 97, 99, 100, 101—Homeric hymns, 102— Homeric Greek, 325-comparison between him and Spenser, XX. 507-Voss's editions of, XXI. 672.

#### H0M-H00

Homer or Omer, a Jewish measure, XI 604; VII 421.

HOMIOIDE, XI. 604; XIV. 429; XV. 567 -its punishment in China, VI. 566-homicidal mania, XIV 533

Homildown, battle of, VI. 616-archers present at, III. 425. HOMILY, XI, 606.

Homobranchia, order of crustacea, VII Homocercal fishes, XII. 209, 333, XVII

126, 640, HOMEOPATHY, XI 606-in the treatment of

live stock, II. 358-number of homocopathists in United Kingdom, XIV. 465 See Hahnemann. Homologies of the mollusks, XV. 324-of

the teeth, XVL 478 - promoted by palæontology, XVII 91.

Homologous series, in organic chemistry, VI 505

HOMONYMS, XI 608. HOMOOUSIANS, XI. 608. Homoptera, insects, IX 166 Honain, translator, XIV. 456. HONDEROETER (Melchior), XL 608 HONDURAS, British, XL 609 - state of Central America, XI. 611. Hone, or Hone-slate, XI. 614, VII. 601 ----- (WILLIAM), XI 614. Honey, IX. 765 — used for preserving

fruts, 767—of Hymettus, XII. 188—of Hybla, XX. 244—ants fond of, III. 264 —used to form lenses, XIV. 769—specific gravity of, XIL 89-dead embalmed with, IV. 347—polarisation of, XVI. 681—occasionally poisonous, XIV. 439 See Apiary, Bee.

Honey-bees, IX. 203; IV. 570. Honey-buzzard, blid, XVI 774. Honey-combs, IV. 577—Buffon's theory of their formation, 578—duiability of, 588

-construction of, XIL 391.

Honey-dew, IV. 572; IX. 171, n. 2. Honey-guides, birds, XVI. 778, II. 218. Honey-hawks, XVI. 744. Honey-soap, XX. 306.

Honey-stone, XV. 125 Honeysuckle, order of plants, V 195; XVII. 764.

ornament in Greek architecture III 468-derived from Assyma, 501. HONFLEUR, French seaport, XI. 615

Hong Kong, island, XI. 615—ceded to Britain, V. 669; VI 597—silver ex-ported from England to, XVIII. 472 HONITON, in Devonshire, XI. 615-lace, XIII. 142.

HONOLULU, in the Sandwich islands, XI. 615; XVIII 272, 273

Honorius (Flavius), Roman emperor, XI. 616; VII. 311.

I, II., IV. (Popes), XI 616. - III. (Pope), XI 616—his persecution of the Albigenses, XII. 387. HONOUR (Legion of), XL 616; XIII. 114,

120, 122, X. 280. remarks on the law of, L 391; VIII. 232.

HONOURABLE, XI. 616. Honours, academical, XXI. 458, 463, 467

et seq. Hood (Alexander), XI 617. (Charles), on the structure of iron,

XII. 570. —— (Lieut.), on aurora borealis in North America, IV. 244, 249

(Mr), on hot-house furnaces, and heating with hot-water, XI. 720, 721.

(ROBIN), XI. 616; XII. 49. (SAMUEL), viscount, XI 617; V. 496.

(Sir Samuel), XI. 617; V. 500. (THOMAS), poet, XL 617. in falconry, XI. 248.

Hooded snake, XIX. 64. Hoofed animals, II. 774. Hoofman (Elizabeth), Dutch authoress, XI.

HOOFFT (Peter Cornelius), XL 618. HOOGEVEEN (Heinrich), XL 619. Hoogetx, town and district in Bengal, XI. 619; IV. 651.

- river, XI. 619; X. 400.

#### HOO-HOR

Hooght's (Van der), Hebrew Bible, IV

Hook, fishing, III 150, 158.

(Dr), his camera lucida, VI 117on capillary attraction, XIL 96-on the deflection of rays of light, VII. 694. (THEODORE EDWARD), XI 620-his novels, XIX 283

HOORAH, XL 620.

HOOKE (Nathamel), XI 620.

- ROBERT), XL 620—his opposition to the optical discoveries of Newton, 667 - his jealousy and illiberality, 595-on the earth's annual motion, II 36-on Jupiter's belts, IV 69-his princaple of arches, III 402-on gravitation, IV. 221; L 675-on pneumatics, IV 453 - his barometer, 454-inventor of the anchor escapement, VII. 8-his improvements in clocks, 3-his watchsprings, I 595-on light, 895-on the teeth of wheels, XIV. 396, 397—on magnetism, 3—his universal joint, 399 his micrometer, 743-on optics, XVI 533, 598, 599—his air-pump, XVIII 34—his discovery of a law of nature, ut tensio sic vis, XX. 751-on the strength of materials, 763-on the thermometer, XXI 221.

HOOKER (John), XI 620.

— (Dr Joseph D), on the Himalayan glaciers, X. 634—on the botany of the Auckland Islands, IV 268—on the Himalayas, XI. 438-on the preparation of opium, XVI, 518

(RICHARD), XI 621—on the law of nature, XIII 254—on virtue, XV. 563 - (Sir William), his improvements in Kew gardens, XIII. 75--on antarctic plants, XVII 625

Hoole (John), XI 622 Hoon, town in Fezzan, IX. 528 Hoop-nets, XIX. 92. HOOPER (John), bishop, XI 622.

HOOPING-COUGH, XI 622. Hoopoes, birds, XVI. 771, VIII. 433.

HOORN, in Holland, XI. 622. Hor, plant, XI 622; V 206—culture of, II. 333—use of hops in brewing, V 324 -their qualities, ib.-of Herefordshire, XI 349-of Canada, VI 147-of Kent, XIII. 66excise duties on, XXL 59. Hope, XIV 576; XVIL 563.

- (Cape of Good). See Good Hope - (F. W.), his works on insects, IX.

(Lord Justice-Clerk), on the right of salmon-fishing on the sea coast, IX. 601, n. 2

(THOMAS), XI. 622-his Anastasius, XIX. 282.

- (THOMAS CHARLES), M.D. XI. 623 -on the maximum density point of water, L 941.

Hopeite, mineral, XV. 93. Hôpital (G. F. Antoine), Marquis de l',

XI. 623-his work on the calculus, I 646.

or Hospital (Michel de l'), XI

- (W), on fractures in the earth's crust, XV, 177-on the thickness of the earth's crust, 184, n

HOPKINS (Ezekiel), bishop, XI. 625. Hopkinson's printing machine, XVIII 562. Hoplegnathus, genus of fishes, XII. 303,

Hoplia, genus of insects, IX. 126. Hoplides, group of insects, IX. 125. Hoplopteryx, genus of fossil fishes, XII.

Hoplopygus, genus of fossil fishes, XII. 336; XVII 125. Hoppe (David Henry), his works on in-

HOR, mount, XI 626; XII 359. HORAPOLLO, XI 626, 376, 381; IL 608. HORATH, XI. 626.

Horatius Cocles. See Cocles. — Flacous (Q), Roman poet, XI 626—Pine's edition of, IV. 707—Cun-ningham's edition of, VII. 586, 587— Bentley's emendations of, 586 - Bur-

# HOR-HOR

man's edition of, V 786-on field-sports, XII 33—his obligations to Mæcenas, XIII. 807—his verses on Pindar, XVII. 711-poetry of, XVIII. 105-friendship between him and Virgil, XXI 595 Hore (H Francis), on Irish fisheries, IX.

618, 629,

Horeb (mount), height of, XVII. 644. Horestii, Caledonian tribe, VI 74. Horia, genus of insects, IX 134.

Horizos, tribe of insects, IX 134.
Horizos, XL 639, IV 1—sensible and rational, IV. 5, X. 480
Horizontal water-wheels, XII 168—steam-

engines, XX. 608

Hormisdas, king of Persia, XVII. 436. Hormuz, XVI 724

Horn of animals, XI 630; XIV. 203-use of, as manure, II. 407.

— musical instrument, XI 631; XV.

711-English, 710-French, XI. 631. or Hoorn (Cape), XL 631—dis-covery of, XVII 336

- (Count), XI 563 et seq.

(Van), bucaneer, V 711 Hornbeam tiee, XVII 758, 765-as tumber, XXI 278.

Hornbearers, order of, XIII. 122. Hornbills, birds, XVI 773 Hornblende, XV. 80, 81—rock, 135—analy-

sis of, II 390-specific gravity of, XIL

schist, XV 154. Hornblower (Mr), steam-engine valves invented by, XX. 603-beam of his engine, VI 267

HORNGASTLE, in Lancolnshire, XI. 631-

fair at, IX. 468. Horn-cobalt, XV. 112.

HORNE (George), bishop, XI. 631—his Introduction, &c., XIX 829 et seg

(T. H), his work on bibliography, IV 716, XIII, 378—on the Mentz Psalter, XVIII 530

Hornemann, his expedition to Africa, IL 210.

HORNER (Francis), XI, 631-on Machiavel. I 236-estimate of his character, 237, 403, n. 1—on the currency, IX 439 Hornet, IX. 198—an enemy to bees, IV.

Horning, in Scotch law, XII. 365. Hornstone, XV. 107. Hornstone, XV 69

Hornung's blue ink, XII 383.

Hornwort, order of plants, V. 206. Hornwork's (Jeremiah), XI. 632—observed the first transit of Venus in 1639, I 611 -among the first who appreciated the discoveries of Kepler, 1b.—died young, but left behind him matter which Newton adopted, 1b.

Horsa, V. 381-ships of, XX. 118.

Horsburgh's barometrical plates, IV. 458. Horse, XI. 632, II 337; XIV. 200—dentition of, XVI 410, 412, 470, III. 107fat of, XVI. 497—race-horse, XI 633— hunter, 645—saddle, II. 337—dray, ib.—hackney, XI 652, 662—charger, 656 -troop-horse, 657-coach-horse, 658grg-horse, 660—post-horse, 1b.—cart-horse, 661; II. 338—Clydesdale horses, 338; XL 662-of America, II. 714-Indian tribes that make use of, 698 -of Arabia, III, 345-of Hungary, XII. 17-Asia, III. 740-Beykancer, IV. 691-17—Asia, III. (20—Deykancer, 17. b) 1— Brazil, V 294—Buenos Ayres, 726— Chile, VI. 549—Derbyshine, VII. 755— Down, VIII. 123—Egypt, 432—England, 723—France, X. 248—Germany, 586— Jown, VIII. 123—Egypt, 422—England, 723—France, X 248—Germany, 586—Greece, XI. 17—New South Wales, IV. 280—Ireland, XI. 662—Jamaica, XII. 682—Japan, 689—Lincolnshire, XIII. 491—Morocco, XV. 594—India, XI. 485 -Norway, XVI. 324-Palestine, XVII. 191-Persia, 423-Prussia, XVIII, 605-Scotland, XI. 662, XIX. 798-Tangustan, or Bootan, V. 34—Spain, XX 489—breeds of the, II. 387—breeding and rearing, 338—feeding, 389, 340—affectionately treated by the Arabs, III. 346 -hots in, IX 247; XXI. 569-vocal organs of, III. 101-small brain of, 178

#### HOR-HOU

-degeneration of, 182 - Apelles as a painter of, 291-speed of race-horses, VII. 230—strength of, in draught, XIV. 417-general treatment of, XL 663; II 339-light playing round the ears and manes of, XIII. 458 See Horsemanship, Hunting, Veterinary Science

Horse-chestnut tree, V. 186, 91; XVIL 759, 762-smooth-fruited species, 762. Horse-flies, IX. 231; XXI. 569 Horse-Guards, XI. 74—Horse Grenadier

Guards, ib.

- master of the, XI. 776 Horse-hoes, II. 275.

Horse-leech, XL 306 HORSE-POWER, in mechanics, XI. 689; XIV. 404—of steam-engines, XX. 602, 601-of boilers, 602-proportion of, to tonnage in steam-vessels, 664.

Horse-shoe magnets, XIV. 72 Horse-tail, order of plants, V. 216, 144. Horsefield (Dr), his work on insects, IX.

15-on the volcanoes of Java, XII. 702 on the birds of Java, 701-on the bats of Java, XIV. 147-on the Mydaus of Java, 158.

Horsemanship, XI. 672 - race-riding or jockeyship, XL 686.

Horsfall (Mr), his assassination, VII. 165. Horsfalm, in Sussex, XI. 689; XX. 839. Horsley (Samuel), bishop, XI. 690 Hortensius (Quintus), XI. 691

HORTICULTURE, XI. 692-fruit and kitchen garden, 697-fruit garden, 702-forcing garden, 719 - kitchen garden, 737flower garden, 745-calendar, 758-in Middlesex, XIV. 808 — hot walls in, XVIII. 79. See Garden, Gardening Horton (Mrs), her marriage to the Duke

of Cumberland, V 474. Horus, VIII. 438; XI. 384, 385, and n. 1

—— Apollo, XI 626. HOSANNA, XI 761. Hosea, book of, XL 761. Hoster (Admiral), V 456

Hosiery. See Stocking Manufacture. Hosians (Mr), on the best means of exploring the White Nile, XVL 269

Hoskyn (Chandos Wren), on agriculture, TI 248, 250.

Hospitality, among the Arabs, III. 353; Circassians, VI. 731; Druses, VIII 199. HOSPITALLERS, knights, XI. 762; VI. 622; XIII. 114.

HOSPITALS, XL 761; XIV. 444 in London, XIII. 673-proportion of patients in, to the population of Great Britain, VIII 749—in France, X. 268—England, VIII 748—Ireland, XII. 529—Edinburgh, VIII. 402—Belgum, IV. 623—Madrid, XIII. 805—Dublin, VIII. 224—Paris, XVII. 283—for lepers, XIII. 340—im-provement in surgical, XX 828—royal naval, at Plymouth, XVIII. 20.

HOSPODAR, XI. 762; XV. 613 -of Wallachia, XXI, 683. Host, XI, 762.

Hot-blast furnace, X. 355; XII. 547 et seq See Furnace, Smelting. Hot-houses, XL 721 et seg

Hot-water apparatus, for heating, XIX.

Hotels, in New York, XVI. 225. Hotham (Admiral), XVI. 133.

Hotman (Francis), on the origin of hereditary nobility, XVI 281. HOTTENTOTS, XL 762; II 222; IX 353;

X. 714—their language, XIII. 203, 219, 225. See Bosjesmans.

HOTTINGER (J. Heinrich), XI. 762. Houbigant's Hebrew Bible, IV. 697; XXX. 835.

Houbraken (Jacob), engraver, XI 762. Houel (M.), his description of the view from Ætna, II. 190-of its forests, 191. Hough (Dr), XVII 392.

Houghton on the potato, IL 259. HOUGHTON-LE-SPRING, XI. 762. HOUND, XI. 762. See Hunting, Dog. Hounds, fishes, XII. 322.

#### HOU-HUA

Hounslow Heath, trignometrical base on, IX. 553; XIX. 456, XXI. 830, 334. Hour, VII 772 et seq.-Egyptian, VIII. 450. See Dialling

- circles and angles, IV. 2, X. 485 Hourdequin, trial of, X. 219.
House of Commons, VIII. 768. See Com-

- Peers, X. 737-the supreme court of appeal, VIII. 787. See Lords, House

(R. E), his printing telegraph, XXL 112

House-tax, XXI 45. Household, The Royal, XI. 773 — France, X. 279

Houses, in London, XIII. 663-number of, in England and Wales, VIII. 717site of, XIV 443-attempts to make them fire-proof, XIII 438-situation and construction of, with a view to health, XIX 613-in the university of Oxford, XXI. 456, 457.

Houssa, in Central Africa, XI. 776; II 229

Houston (Mr), on the tongue of the chameleon, III. 100.

city of Texas, XI. 779. Hovas, people of Madagascar, XIII. 792. HOVEDEN (Roger de), XI 779 Hovell's explorations in Australia, IV

Hovellers (The), XL 780. Hoven, disease of cattle, XXL 566.

Howard (Catherine), VII. 482, VIII. 704, - (CHARLES), Lord Howard of Effing-

ham, XI 780. (Sir Edward), on the state of the fleet in 1513, XX. 125

- (Lady Frances), II 15.

(Henry), earl of Surrey, XI. 780— his execution, VIII 706—poetry, 796— (John), XI. 782; XVIII. 568—his tomb, IV. 748; XIII. 77

- (Luke), on the electricity of clouds, VIII 581-his nomenclature of clouds XIV 655.

- (Mr), his account of meteoric stones which fell near Benares, XIV. 631.

(Mr), his report on Irish fish, IX. 632

(Mr), his process of distillation in vacuo, XX. 556—his vacuum-pan, 793 Howard's patent harrow, II. 272 Howard-Arundel MSS, XIII 392. HOWDEN, in Yorkshire, XI, 787.

Howe (Dr), his printing for the blind, XVIII. 554.

(General), V. 487; XXI, 750, 751,

(Joan), Puritan divine, XI 787on the cosmological argument for the existence of God, XXI. 186

(RICHARD), viscount, XI. 789; V. 487; XXI. 750—his victory over the French fleet in 1794, V. 554. Howe of Fife, IX. 543, 544.

Howell (Mr), his method of boring wooden pipes, V. 45.

(Mr), his photographic process XVII 548

Howick (Lord), his bill for religious liberty in the army and navy, V. 600. Howitzer, XI. 790, 140—boring of, V. 42

-tables of ranges for, XI. 149-table of length, weight, &c., of, 184. Howler-ape, voice of, III. 101. Howlett (Mr), on the population of Eng-

land, VIII, 753.

Howship on the development of bone, II 828, 829, Howson (Mr), on the ruins of Iona, XII

Howre, town near Dublin, XI. 790; VIII. 214-diving-bell used in making the harbour of, 65.

Hov, one of the Orkneys, XI. 790; XVI.

Hoyle (Mr), on evaporation, IX. 410. Huahine, island, XVIII 279, 280. Huamanga, in Peru, XI. 790, 73

# HUA-HUM

Huancavelica, in Peru, XVII. 474. Huantajaya, silver mines of, XVII. 622. Huaras, town in Peru, XVII 474 Hubbard (Mr), on the Bank Act of 1844, XV. 467.

(Mr), his estimate of the supply of wool, XXI 906, 907

Hubery, town in Hindustan, XI 790. HUBER (Francois), XI. 790-his hive, III. 295-his work on bees, IX. 12-on bees, IV 571 et seq—his blindness, 780—on the sense of smell in bees, IX. 44, 45 - (Pierre), on ants, III 261 et seq on bees, IV. 573-his works on insects, TX. 12. Hubert (Louis), conspirator, X. 214

Hubner (James), his work on insects, IX.

Huddart (Joseph), his rope-machinery, XIX. 407, 409, 410 Hudde on insurance, XII 396 HUDDERSFIELD, in Yorkshire, XI 790. Hudson (Henry), XL 790—his discovery of New York, XVI 216; Greenland, XL 39—voyages of, XVIII 168.

(Jeffery), dwarf, VIII. 271. (Jonn), XI 791—his collection of the minor Greek writers on geography, X. 468

city in Columbia, XI 791. RIVER, XI 792, 790, XVI. 213; XVIII. 168-Hudson valley district, XVI 213

Hudson's Bay, XL 791; XVIII 168 et seq -French expedition to, in 1782, V 501 - Bay Company, XI. 791—history of, X. 345—present state of, 346, 347—its contests with the North-west company, -their expeditions of discovery, XVIII 169, 170, 172, 175

- Bay sable, X 347 - BAY TERRITORY, XI. 791. - Straits, XVIII. 167, 168; XI. 790. Hudsonite, mineral, XV. 81

Hué, river and town in Cochin-China, VII. 49. HUE AND CRY, XI. 792; XVIII 191.

HUELVA, Spanish province, XI. 792; III 123, 124.

Spanish seaport, XI 793.

HUERTA (V. Garcia de la), Spanish poet, XI. 793

Hulsca, town and province of Spain, XI. 793: III 393

HUESCAR, town of Spain, XI, 793. HUET (Pierre Daniel), XL 793 - supermtended the Delphin edition of the classics, IV. 711—Huctiana, II 739— disposal of his library, XIII. 376—his praises of tea, XXI 83

Hug on recensions of the text of the New Testament, XIX. 836. Hughes (Mr), his printing telegraph, XXI.

94, 112, 113. Hugo de Sancto Caro (Cardinal), IV. 695-

his division of the Scriptures into chapters and verses, XIX. 838 Hugo of Lucca on anæsthetics, VI. 632

- (Victor), XVIII. 117-character of his novels, XIX. 289.

HUGUENOTS, XI 794; X. 32 et seq; XIX. 163-assisted by Queen Elizabeth, VIII.

Hullier (1') on the geometrical structure of bees' combs, IV 578. Hush on bees, III. 294, 296.

(Captain), on railway accidents, XVIII. 795.

Huitzilihuitl, Mexican king, XIV. 700. Hulaku Khan, XVII. 437. Hulks, XVIII. 570; XX. 123.

HULL, XL 794—siege of, in 1643, V 464—docks of, VIII. 74, 75—tonnage of the port of, 738.

- (Mr), on the great colite, XV 207. Hulls (Jonathan), his idea of a steamboat XX. 636

Human body, electricity of, VIII. 571poisons generated in, producing disease, XIX 612.

nature, science of, XIII. 263. Humane Society, their rules for the recovery of drowned persons, VIII. 182.

# HUM-HUM

Humanity of Jesus Christ, XXI 210. Humann (M.), X. 218, 219. HUMBER, river, XI 796; XVII. 647 Humbert (General), his invasion of Ireland, X. 109.

Humbie sandstone, XX. 711. Humble-bees, IX 201

Humboldt (Alexander von), L 992-his early history and travels, ib -his contributions to physical geography, ib on America, II 669 et seq -on the indigenous Americans, 676-on American languages, 679-on the geology of the Andes, III 129-his account of his journey across these mountains, 131account of a crocodile roused from its summer sleep, 181 - on the ancient buildings of Mexico, IL 685-his table of the produce of gold and silver mines of America, 706-barometrical observation on the summit of Chimboraço, IV 467-on the equinoctial current, 176vertical section of America, 468-his contributions to magnetism and meteorology, I 991, 993; XIV. 7, 17, 61—on the alpine vegetation of South America, V. 226—on terrestrial temperature, VI. 769-on isothermal lines, 771; I. 993; XIV 664—his isotheral and isocheimal lines, 1b-on the horary variations of the barometer, VI 775-on the Canary Islands, 164, 165, 166—on the electricity of the torpedo and electrical eel, VIII 573, 575, XII 233-his confirmation of Galvani's experiments on the electricity of the frog, I. 960-on the vegetable productions of Mexico, XIV 716, 717—his exploration of the Orinoco, XVI 716—his Kosmos, XVII. 527—on the results of philology, 536—on the centres of gravity of continents above the sealevel, 590-his classification of plants characteristic of different zones, 626on population, XVIII. 338, 841, 842-on the supply of precious metals from America, 400—his letters to Varnhagen Von Ense, XXI. 525-his theory of vol-

canie action, 607

— (Karl Wilhelm von), XI 796—
on the Basque language, IV. 490, XIII 214-on the inhabitants of the banks of the Iberus, XII. 196. Humboldtilite, mineral, XV 73.

Humboldtine, mineral, XV 125. HUME (David), XIL 1-his estimate of

Machiavelli, I. 24-on modern improvements in monarchical governments, ib. -on the statutes of Henry VII, 37, 38 -on Harrington's Oceana, 47, n. 1-on the influence of the civil war of 1640, 48-his residence at the village of La Fleche, 61, n. 4-on Sir Isaac Newton, 78—on cause and effect, 78, n. 2, 3; 211, et seq, 286—his Treatise of Human Nature, 206, 207, 221, 369-its effects on literature, 208, 214, n 2—his division of the objects of knowledge, 208-admitted the existence of only impressions and ideas, 209, 219, n. 2—his scepticism, 209, 210, 215; XIV 612, XIX. 709—his refutation of attempts to demonstrate self-evident truths, I. 210—benefits which have resulted from his reasonings, ib -his distinction between the sensitive and cogntative parts of our nature, 112-on our conviction of the permanence of the laws of nature, 1b. on the course of nature, and succession of ideas, ib, n 2—his reformation of the philosophical vocabulary, 213 instance of his sincerity in the search after truth, 216-Butler's opinion of his essays, 217-virtuous private character of. 368—anticipated in some of his doctrines, 441-considered his Inquiry concerning the Principles of Morals as the best of his writings, 870-merits of that work, 371 et seq.—his style, 370—his work, 511 et seg.—Ints styte, 510—Ints styte,

universe, III. 189, n -- on the balance of

# HUM—HUN

power, IV. 389-Dr Beattle on, 530his injustice to Prynne, 713 — on miracles, IX. 417; XV. 264—on Roman lawyers, VI. 745—on the coinage, VII. 78, 79-on the effect of a progressive rise of prices in stimulating productive industry, 189, n.-on Demosthenes, 729 on the character of Oliver Cromwell 509—his letter to Gibbon, X, 612; to Dr Reid, XIX. 2-his defects as a historian, XI 546-on manufactures, XIV. 291on causality, 600 and n. 4—on rates of interest, XVIII 217, n. 1—on political economy, 220-on money, 476-his intimacy with Dr Robertson, XIX 232his conduct to Rousseau, 449-on Rousseau, as a writer, 450—Smellie's life of, XX. 337-on Smith's Wealth of Nations, 341-Adam Smith's account of his death and character, 342, and Lord Halles' Latin version of it, VII, 635—his essay on taxes, XXI 38—on the argument for the existence of God from design, 199

HUME (Joseph), XII. 8-his opposition to ministers on financial questions, V 632, 635, 638-his committee on the Mint, VII 81-his motion on the Irish Church.

V 641—on the corn-laws, 650 Humiriaceæ, nat order of plants, V. 187. Humerpoor, town in Hindustan, XII 9 Humerus, or arm-bone, in man, III. 31-

in mammalia, 81—in reptiles, 88 Humidity, XII. 186—of the air, XIV. 675. See Moisture.

HUMILIATI, XII. 9

Humiliation, Christ's state of, XXI 211. Humility, I. 397.

Humite, mineral, XV. 189.

Humming birds, XVI 770; V 294, XVII 633, 268—in West Indies, XXI. 837 Humours of the eye, XIII. 461; XVII.

HUMPEREY (Laurence), XII. 9 - duke of Gloucester, VIII. 688, 689. Humphieys (H. R), his works on British insects, IX. 22

Humus, II. 376; V. 95—soils, 98 Hundred court, VIII. 786

HUNDREDS, XII. 9—division of English counties into, VIII. 720.

Hung-sieu-tseuen, Chinese fanatic, VI. 598, 599

Hungarians, their invasion of Switzerland, XX. 883.

HUNGARY, XII. 9-fairs, IX 469-libraries, XIII 423-silver mines of, XV. 236height of mountains, XVII, 642-condition of the Jews in, XII 783-monarchy, XV. 413-language, XIII 215-Presbyterian Church in, XVIII 486-aversion to the name of queen in, 727—war with Russia and Austria, XIX. 498—silk pro-duced in, XX. 278—war with Sweden,

852 — Turkish invasions, XXI 369 — wines of, 885, 886. —— water, XII 26 HUNGER, XII. 26; XVII 658

HUNGERFORD, town in Berkshire, XII. 26, TV. 666

suspension-bridge, XIII. 676 HUNNI, or Huns, XII. 26, 11, X. 577, 728 -Charlemagne's war with, 8-De Guignes' history of, XI. 87-language of, XIII. 217.

Hunniades (John), VII. 820. Hunt (Captain), V. 470 ———— (John), XVI. 186.

Byron, VI. 39; XVI. 186

British minerals, XV. 248. (Mr), on photography, XVII. 546,

(Mr), his estimate of the value of

549, 550. (M1), his mode of curing stammer-

mg, XX. 534.

Hunter (Capt.), governor of New South Wales, IV. 271. - (Dr John), on grammar, X. 746 et

seq., 792.

(JOHN), XIL 26; XIV. 462-his anatomical labours, II 765, 766—on the distinction of species, III. 175—on

# HUN-HUT

bees, IV. 570 et seq -on the varieties of the human complexion, VII. 222-his discovery of lymphatics in birds, IL 766 -on the period of gestation in the human species, IV. 492, n 1-his experiments on hybrids, XII 63-his intimacy with Dr Jenner, 720-compared with Dr Jenner, 725—on the circulating system of crustacea, XV. 356—on the teeth, XVI. 459-his work on Digestion, XX. 497—his improvements in surgery, 819-too fond of amputating, 823, n. Hunter (Joseph), on Pope's ancestry,

XVIII 322 - (Dr William), XII 29; XIV 462 -his anatomical labours, II 765, 766on cellular and adipose tissues, 786, 787 on the lymphatics, 804, 805-on cartilage, 831, 832-his copartnership with Dr Cullen, VII 572—on the torpedo, VIII. 573; XII. 326, and electrical eel,

horse, XL 645, 662, 664, 667, 634

—purchase of a, 652. —river, IV. 279-80—winesof, XXI 887. Hunter's stone-borng machine, V. 45 Hunterian Museum, X. 652; XII. 30.

HUNTING, XII 31, XX. 209--of the boar. IV. 79—in chivalry, VI. 612—horse-manship in, XI 679, 680
HUNTINGDON (Selina), countess of, XII

48—her religious party, XIV. 698—her patronage of Whitefield, XXI 854.

Station, on the Great Northern Railway, XVIII 774. Plate

town, XII 48 - willow, XVII. 759.

HUNTINGDONSHIRE, XII. 48 — population and value of property, VIII 754 HUNTLY, IN Aberdeenshire, XII 49; II. 34. Huntsman, XIL 44-duties of, 45.

Hunyadi (John), XII. 13

— (Matthas), XII 14

Hupeau (M), his centre for the bridge of Orleans, VI. 378

Hurd (Richard), bishop, XII 49—his answer to Hume, 3, XXI 730—his panegyric on Warbutton, 728—on Board of the control of the c lingbroke's attack on Pope, 729-his preface to Warburton's works, 731, his letters to that prelate, ib

HURDWAR, in Hindustan, XII. 49-commerce of, XI. 459—fair at, IX. 469. Hureaulite, mineral, XV. 101.

Hurmuzd, king of Persia, XVIII. 436. Hurnon, lake, XII. 50; VI 137, XIV 739; XVII 605.

—— genus of fishes, XII. 274. Huronia, fossil mollusks, XVII. 112. Huronite, mmeral, XV. 73 HURREEANAN, in Hindustan, XII. 50

Hurricanes, XIV 649; XVII 616—in Ja-maica, XII 673—Barbadoes, IV 429,

HURRUR, African town, XIL 50 Hurst castle, XI. 204—Charles I, prisoner in, V. 411.

Hursthouse (Charles), on New Zealand. XVI 233 et seq.

HUSBAND and WIFE, XII. 50-laws regarding, VIII. 782—duties of, XV. 568. Husbandry. See Agriculture.

HUSKISSON (William), XII 57-his bill for amending the combination-law, V 643 -dismission from the ministry, 651; XVII. 363—on the corn-laws, V. 636; VII 390-on the sinking fund, X. 329, 332.

Huss (John), XII. 57; IV. 310; XVIII 449 - his connection with Jerome of Prague, XII. 728, 729.

Hussars, light cavalry, XII. 60 Hussey's reaping machine, IL. 276. HUSTINGS, XII. 60

HUTCHESON (Francis), XII. 60; L 204 and n. 3, 364-his writings and philosophy, 205-his letters to Dr Clarke, 364 the moral sense, ib.; XIV. 580; XV 544—compared with Butler, I 364—or secondary desires, ib.-his errors, 365on beauty, IV. 538.

Hutchins' experiments on the freezing of quicksilver, VI. 352.

## HUT—HYD

HUTCHINSON (John), XII. 60-on the Deluge, VII. 720.

(General), V. 584, VIII. 489, X 121-on the death and character of Sır

R. Abeleromby, II 29.

Hutchison (Mr), his patent for protecting the surface of building-stone, XX. 785 Hutten (Ulrich Von), his attack on Erasmus. IX. 321.

HUTTON (Charles), XII. 61-on gunnery. XI 107, 122 et seq—on the resistance of fluds, XII. 161—his mathematical tables, XIII 555—his pendulum eprouvette, XI 157-his account of Laplace's theory of meteorolites, XIV 633

- (DR JAMES), XII 61-his manu factory of sal-ammoniac, II. 721-his theory of the earth, I. 928; XII 684; XVIII. 5, 6-theory of rain and vapour, I 928-contrasted with Dr Black, ib.

Huxley (Prof), on the motion of glaciers, XV. 139, n. 1—his arrangement of the hydrozoa, XXI 1006-on the genus thalassicolla, 1008.

Huxtable (Rev A.), his mode of feeding cattle, II 345.

Huy, town in Belgium, XIL 61 Hoygens (Christian), XII 61-his discovenes regarding motion, I 595—his micrometer, 612; XIV 757—other adaptations of the telescope to astronomical purposes suggested by, I. 613 —on telescopes, II. 89—his theory of hight, I. 630, 895, 896—his life and character, 697, n. 1—his improvements in dynamics, 719-on probability, IIL 220 on Saturn, IV 71, 72; I 612—his astronomical discoveries, III 802; I 612-on pneumatics, IV 453-his barometer, ib .- on barometrical measurements, 463, n. 1-on the pendulum, VII 3; I. 595, 697, n. 1, XVII 376—principle of, I 896—on probabilities, XII 394-on simple and double refraction, I 631, 895, 901; XIII. 453-on the figure of the earth, IX. 549-on micrometers, XIV 743—his birthplace, XI 181—extiact from a MS of, regarding Sir Isaac Newton, XVI. 206, n 2—on the discovery of the telescope, 527; and mi-closcope, 529—on double refraction and polarisation of light, 531, 532, 627; discovery of polarisation by calc-spar, I 903-his lens of no aberration, XVI. 574-his long-focused refractors, XXI 119—his eye-piece, 124—on the doctrine of chances, XVIII. 589—his experiment on the alternate attraction and repul-sion of glass, XX. 758—on the quadrature of the circle, 523.

HUYSUM (Jan Van), painter, XII. 61 Hyacinth, V 212—culture of, XI. 751.
——mineral, XV. 85

Hyæna, genus of mammalia, XIV. 167—dentition of, XVL 459, 460—fossil, XVII 172.

Hyænodon, genus of fossil mammals, XVII 165—dentition of, XVI 464.

Hyalæa, genus of mollusks, XV 358fossil, XVII. 111.

Hyalite, mineral, XV 69.

Hyaloid membrane and fluid of the human eye, III 44.

Hyalosidenie, mmeral, XV 89. HYBERNATION, XII. 62, III 180; II 52— of the marmot, XIV 179—of bats, 147—in the insectivorous mammals, 150 of the dormouse, 180—hamster, 182—economic rat, 183—tanrees, 152.

HYBLA, in Sicily, XII. 62—honey of, XX.

Hybodus, genus of fossil fishes, XIL 340, XVII. 117.

Hybos, genus of insects, IX. 235. Hybotanæ, insects, IX. 235 HYBRID, XII. 63—generally barren, III.

Hybridization in plants, V. 159. HYDASPES, now Jelum, river, XII. 63; XVIII. 687—passed by Alexander the Great, XIII. 769.

Hydaticus, genus of insects, IX. 140. Hydatids, XXI 976.

#### ${ m HYD}$ — ${ m HYD}$

HYDE (Edward), Earl of Clarendon, XIL 63; V. 421, 422 — impeached, 425 — on Blake's exploits, IV. 752—on the government and laws of England, VIII. 763 n, 769 et seq—on the character of Selden, XX. 38—on the star-chamber.

Park, London, XIII. 668 (THOMAS), orientalist, XII. 67.

town in Cheshire, XII. 67.
Hyder Ali, XII 67, XI. 490, 492 et seq; XIV. 104, 105-his conquest of Canara, VL 160

HYDERABAD, XII. 67, 68; XI. 450, 463 city and fortress, in Scinde, XIL 68; XX. 305—climate of, 304—remarkable fall of ram at, ib—capitulation of, to Sir C J. Napier, XV. 776.
HYDRA, island, XII. 69

polypus, XXI. 1005.

Hydrachna, genus of arachnides, III 389. Hydrangeaceæ, nat order of plants, V.

HYDRAOTES, river, XII. 69, XVIII. 687 Hydrargillite, XV 86 Hydrargyra, genus of fishes, XII 252. Hydraspis, genus of reptiles, XIX 18. Hydrates of hme, XX. 713

Hydraulic press. See Hydrostatic.
— ram, XII 75, 173.
HYDRAULICS, XII 103, 69—Souterasi, or hydraulic obelisks at Constantinople, III. 335-pipes for conveying water into towns, 337—Coulomb on the cohesion of fluids, VII 464—mean hydraulic depth, I. 886, XIX 194-hydraulic machinery, XII. 163—improved hydraulic machines, I. 889—theory of the motion of rivers and canals, XIX. 182—principle on which systems of depend, 184—laws of, applicable to air, XVIII. 29. See Aqueduct, Fluids, Hydrodynamics, Pumps, Water-works, &c

Hydriodate of potassa, XIV. 435. Hydriodic acid, VI. 470 Hydro-carbons, XIX 87.

Hydro-electric machine, VIII. 605, 534. Hydroboracite, XV 94.

Hydroborocalcite, mineral, XV 94 Hydrocampe, genus of insects, IX. 218. Hydrocanthari, insects, IX. 100. Hydrocele. surgical treatment of, XX 835.

Hydrocephalus, in the domestic animals, XXI 575.

Hydrochærus, genus of mammalia, XIV.

Hydrocharidaceæ, nat. oider of plants, V. 210. Hydrochloric acid, VI. 467-gas, poison,

XIV. 435.

Hydrochus, genus of insects, IX. 116.

Hydroconisse, insects, IX. 164.

Hydrocyanic acid, VI. 474—its poisonous propertaes, XIV. 437, XVII. 702. See Prussic Acid.

Hydrocyon, genus of fishes, XII 247. Hydrodynamics, XII. 69; I. 886—funda-mental principles of, 723—Daniel Bernoulli on, ib.-D'Alembert and Euler, 724—Lagrange, Newton, Bouguer, 1b-Bossut, 725 — experiments of Smeaton, ib.—method of investigating the resistance of fluids, ib .- experiments of Robins, Borda and Hutton, on the velocity of moving bodies, 726; of Coulomb, ib., 887 - observations on the flow of air and water through pipes, 726-Ampere's experiment of projection of water through a vertical slit, ib.—progress of, 886—Dubuat on, ib., 887—friction and resistance of fluids, 886—viscosity of fluids, 887-Venturi on, 727, 887-three cases of fluid resistance to moving solids, 887—Prof. Stokes' definition of index of friction, ib —Weber's and Russell's experiments on waves, 888—peculiar effect of wave transmission on canal navigation, 889-water-wheels, 889, 890 turbines, ib —Poucelet on, 890—breastwheels, ib.-motion of fluids in pipes, XVIII. 64. See Hydraulics, Hydrostatics.

Hydrofluoric acid, VI. 470.

HYD-HYL Hydrogen, in chemistry, VI. 457—in mmeralogy, XV. 60, 61—combined with oxygen, VI 458, with carbon, 478—in plants, II. 375; V. 95—its lightness and use in balloons, II. 170, 171, 172—tones produced by the burning of, 108-spe cific gravity of, XII. 89—its use with oxygen in the blowpipe, IV 794—alimentary substances containing, VIII. 18, 19, 24—electricity developed in the combustion of, 568-deutoxide of, 461illuminating power of gases deteriorated by mixture with, X. 431—as an element in the crust of the globe, XVII. 618—in the combustion of coal, XX. 629—carburetted, X. 431; XIV. 436, XVII 602—sulphuretted, XIV 436. Hydrographic charts, VI. 426 Hydroida, polypes, XXI 1005. Hydromagnesite, mineral, XV 92. Hydromagnocalcite, XV. 92. Hydromancy, VIII 54.
Hydrometer, XII. 185, 86. Hydrometra, genus of insects, IX. 164. Hydromys, genus of mammalia, XIV. 180 Hydropardus, genus of fishes, XIL 247 Hydropathus, XIV. 465. See Preissnitz. Hydrophane, mineral, XV. 69. Hydrophili, insects, IX. 116. Hydrophus, genus of serpents, XIX 67— teeth of, XVI 432—poison of, XIX 46 Hydrophite, mineral, XV 80. Hydrophics initial at vov.

Hydrophicsia, XII. 185; VIII 423; XIV

440, XVII, 700—dipping as a cure for,

XII. 721, XIV 454—in the domestic animals, XXI 575 Hydrophyllaceæ, nat. order of plants, V Hydroporus, genus of insects, IX. 101.
Hydroseleme and, VI 478
Hydrostatic balance, IV. 388—press, II.
102; IV. 451; V 273, XII. 178; XIV. -test, 423--bellows, XII. 81. HYDROSTATICS, XII. 185, 77, 69; XVIII. 22—discoveries of Archimedes, Stevinus, Torncelli, Otto Guericke, L. 596-principles of, 723, 724—Euler on, 724theory reduced into a simple form by Bouger, 725-outline of this theory, ib -investigation of the earth's figure from the laws of, IX. 564-laws of, applicable to air, XVIII 29. Hydrosulphuric acid, VI. 477 Hydrothorax, in the domestic animals, XXI. 573. Hydrous, genus of insects, IX. 116. Hydrozoa, polypes, XXI. 1006 — fossil, XVII. 95. HYDRUNTUM, now Otranto, XIL 185; XX. 242. See Otranto. HYERES, French town, XIL 185. - islands, XII. 185. Hygeia, planet, IV 91. Hygiene, public, XIV. 463; XIX. 602-general, 607—special, 613. Hyginus (C. Juhus), XII 185. Hygrobia, genus of insects, IX. 101 Hygrometer, XII. 186, IV. 183—dew-point hygrometer, L 935—invention and description of, 765—applications of, 766, 767—Leshe's, VII 102—necessary in hot-houses, XI 724—its use in barometrical observations, IV. 466-Peltier's thermo-electric hygrometer, XXI. 654. HYGROMETRY, XII 186, XIV. 653—observations on, in a balloon, by Biot and Gay-Lussac, II. 182, 183—theory of, I. 934 M. Regnault on, 958 periodical fluctuations in the hygrometric state of the atmosphere, XIV. 674—Saussure's work on, XIX. 653—best time for hygrometric observations, XXI 225. See Meteorology, Evaporation.

Hygroscope, XII 186. See Hygrometer
and Hygrometry. Hyla, genus of reptiles, XIX. 78. Hylæosaurus, fossil reptiles, XVII. 151, 640. Hylæus, genus of insects, IX. 198. Hylesinus, genus of msects, IX. 142. Hylism, IX. 421. Hylobates, genus of mammalia, XIV. 139 Hylobius, genus of insects, IX. 140.

# HYL—HYT Hylotoma, genus of insects, IX. 183

Hymenoptera, order of insects, IX. 25,

HYMETTUS, mountain, XII. 188-marble of,

HYMN, XII 188-Homeric hymns, XVIII.

Hyodontidæ, family of fishes, XII 248, 249 Hyoid bone, III. 26—its muscles, 39—of the perch, XII 214

Hyoscyamus niger, its poisonous properties,

Hylurgus, genus of insects, IX. 142 Hymen, in anatomy, III. 71.

Hymenium, in botany, V. 142, 147

102—Spenser's, XX. 506 Hynnis, genus of fishes, XII 297

Hyodon, genus of fishes, XII 249

XIV. 437. See Henbane.

Hypæthros, in architecture, III 510 Hypatia, XII 190, II 483, IX 677; X. 502-invention of the argometer erroneously ascribed to, III 390; XII. 86 Hypatius, VII 312. Hypera, genus of insects, IX. 139. HYPERBOLA, XII. 191; X. 544, 555; XIV 518, VII. 269—in masonry, XX. 726 HYPERBOLE, XII. 191. Hyperbolic lenses, XVI 574. Hyperboloid, X. 559, XIV 519. Hyperborean, Abans (the), II 10 Hypericaceæ, nat. order of plants, V 186 Hypermes, Athenian orator, XII. 192; XVII. 526 Hyperion, XI. 385. Hyperoodon, genus of mammalia, XIV. 230-jaw and teeth of, XVI 443. Hypersthene, XV. 82-rock, 135 Hypertrophy, XVII 663, 690 HYPHASIS, river, XIL 192, XIII. 770; XVIII. 687 Hypnos, genus of fishes, XII 327. Hypnotism, XX. 413, 433. Hypo, a prefix, VI. 453. HYPOCHONDRIASIS, XII. 192. Hypochloric acid, VI 468. Hypochlorite, XV. 90. Hypochlorous acid, VI 468 Hypocycloid, VII. 269; IX. 274. Hypoderma, genus of mammalia, XIV. Hypogeon, genus of annelides, XI 302 Hypogea, in architecture, III. 510. Hypogynous stamens, V. 127, 179—exo-Hyponitrous acid, VI 463. Hypophosphorous acid, VI. 480 nypopnospnorous acu, VL 480 Hypophthalmus, genus of fishes, XII. 262 Hypoprion, sub-genus of fishes, XII 323 Hypostasis, XII. 193, 727; XXI 193, 194. Hypostabite, mineral, XV. 76. Hypostomus, genus of fishes, XIL 264. Hyposulphite of soda, its use in photography, XVII. 545, 547. Hyposulphuric acid, VI. 477. Hyposulphurous acid, VI. 476. Hypothenuse, X. 508. HYPOTHESIS, XII 193—in geometry, X. 508—the true use of, I. 101, n. 2. Hypotrachelium, ın architecture, III 510. Hypoxidaceæ, nat. order of plants, V. 212. Hyprorus, genus of fishes, XII. 229 Hypsinotus, genus of fishes, XII. 302 Hypsiprymnus, genus of mammalia, teeth of, XVI. 449 Hypsodon, genus of fossil fishes, XIL 346. Hypulus, genus of insects, IX. 182. Hyracotherium, teeth of, XVI. 465. Hyrax, genus of mammalia, XIV. 199stomach of, III. 108-dentation of, XVI. HYROANIA, XII 193-reduced by Alexander, XIII. 768 Hyrcanus (John), XII. 733, 770, XVII. 194. Hyrtl (Joseph), his anatomical works, IL 770. Hyson teas, XXI. 87. Hyssop, V. 202; XI. 745 HYSTERIA, XII. 192; XVII. 700. Hystricidæ, family of rodents, XVII. 632. Hystrix, genus of mammalia, XIV. 187 Hysudrus, river in the Punjab, XVIII. 687.

HYTHE, town in Kent, XII. 193—extract from its corporation records, XV. 683.

# Í—ICH

Ι

I, letter of the alphabet, XII. 194-in ab-

breviations, II 19 Ialta, or Yalta, in the Crimea, VII. 505
Iambic verse, XII 195—its invention ascribed to Archilochus, III. 429 IAMBLICHUS, XII 194. IAMBUS, in prosody, XII. 195; IX. 770 Iannas, Egyptian king, VIII. 457 Ianthina, genus of mollusks, XV 389. IAPODES, tribe of Illyria, XII 195. Ibalia, genus of insects, IX. 192. Ibatzes, VII 314. Iberia, name of Spain, XIL 196 ın Asıa, XII 196, X 566--ravaged by the Turks, VII 315. Iberian alphabet, II. 615—language, IX 35L - mountain system, XVIL 595; XX. 496 Iberians, IX. 387; XX. 457. IBERUS, now Ebro, XII 195. See Ebro Thex, IL 626; XIV. 212—peculiar to the Alps, XVII. 630, 632—Caucasian, XIV 212. See Bonquetin IBIS, bird, XIL 196; XVI 800-Egyptian, VIII. 433, 488-sacred to Thoth, XI. Ibn Sina, See Avicenna. Ibos, African race, IX. 352. Ibrahim Aga, III 365, n. IBRAHIM, or Ibraheem Pasha, XII. 196; VIII 494, 495—his war against the Wahabys, III. 365—his Greek cam-paigns, XI. 28—his conquest of Syria, XX. 911 - Bey, VIII 488 - Turkish emperor, XXI 369, 376. IBRAIL, XII. 196; V 266, XXI. 683. Ibycter, genus of birds, XVI. 741. Inxcus, Greek poet, XII. 196. Icacinaceæ, nat. order of plants, V. 185. Icarus, VII 616. ICE, XII. 196; XV. 125—celerity of sound through, II. 103-how collected in India, VII. 101—artificial, 104, 544; XI. 271, 275; VI. 353-mode of forming it in India, IX. 415, XIV. 646—floating, XVII. 583—cause of its floating, XI 269—field, pack, and floe ice, XVII 584—glacier ice, X 636, 639—system of rings formed in, XVI. 652—specific gravity of, XII. 88—its influence on rocks, XV. 139—its clasticity, &c., XX. 753, 754 ICE-HOUSE, XII. 196. Ice-islands, XII 197. Ice-plant, V. 194. Ice-spar, XV. 70. ICE-TRADE, XII 196. ICEBERGS, XII. 196; XVII. 583—influence of, on rocks, XV. 140. Iceblink, XIL 197. ICELAND, XII. 197-ancient mythology of, VIII. 388—its volcanic nature, IX. 384—glaciers, X. 634—language, XIII 211 birds, XVI. 731—proportion of insane, XIV. 536 - height of mountains in, XVII. 644—volcanoes, 589; XXI. 605— Geysers, XVII. 602—its poets and his-torians, XIX. 691—sagas of, 690— Rask's Icelandic grammar, XVIII. 808. -system of rings in, 651, 652, 663luminous circles in, 689—electricity produced by pressure of, VIII. 562. See Calcareous Spar. Icelus, genus of fishes, XII. 282. ICENI, XII 203; IV. 799. Icennine Way, VIII. 112. Icetas, VI 283; XX. 900. ICHNEUMON, XII. 203—genus of insects, IX. 188—one of the mammalia, XIV. 166. Ichneumonides, tribe of insects, IX. 184. Ichnography, III. 510.

# ICH-IDO

Ichnology, XVII. 129.
Ichthyocampus, genus of fishes, XII 315.
Ichthyodorulthes, fossil fishes, XII 339
ICHTHYOLOGY, XII 204—circulation and respiration of fishes, II. 772—bones, III. 74, 89—muscles of tail, 93—organs of smell, 94—eyes, 95 et seq—ears, 99—nervous system, 108, 104—brain occupies but a small part of the skull, 104—stomach, 109—pyloric appendages, 111
—intestines, 110, 111—organs of circulation, aeration, and secretion, 112, 113—teeth of fishes, 105, 106, XVI 420, as a means of classification, 477—Cuvier on, VII 605—electricity of fishes, VIII. 572—fishes ejected by volcanoes, XXI. 607. See Fish and Fisheries
— (Fossin), XII. 332; XVII 115, 129,

(Fossil, XII. 332; XVII 115, 129, 640—fossil fishes of Perthshire, 457—Roxburghshiie, XIX. 453—Russia, 517—Scotland, 791, 793—order of their appearance in the strata of the earth, XVII. 92.

Ichthyophagi, XVI. 125 Ichthyopterygia, fosal reptiles, XVII 149. Ichthyosaurus, XVII. 149—pecuharities of its bones, III. 89—its eyes, 96 Icolmkill, XII 440. See Iona

ICONIUM, town of Asia Minor, XII. 356; XIII. 129. ICONOCLASTS, XII 356, 357; XIII 324,

1CONOCLASTS, XII 356, 357; XIII 334 641, XVII. 59 Iconolatræ, XII 356.

Icononzo, natural bridge of, III. 130 Icosandria and Icosandrous, in botany, V. 177, 127

Icositetrahedron, XV. 41, 42.
Icterus, genus of birds, XVI. 762.
Ictdes, genus of mammalia, XIV. 155.
Ictimia, genus of birds, XVI. 744.
Ictimia, Greek architect, XII 356—architect of the Parthenon, IV. 168—temple erected by, on Mount Cotilium, XVII 508.

IDA (Mount), XII 356; VII 615.

—— Saxon chief, XIX 743
Ideal, in the fine arts, III, 707, 716
IDBALISM, XII. 356—by whom first assailed, I. 80—Berkeley's theory of, 165,

sailed, I. 80—Berkeley's theory of, 165, XIV. 611—the object of Dr Reid to refute it, I. 218—Schelling's views of, XIX 716 Idealist, meaning of the term as employed.

Idealist, meaning of the term as employed in philosophy, I 190, n 4 Ideality, XVII 563. Ideas, XIV. 552 et seg—M. Allamand's

Ideas, XIV. 552 et seq.—M. Allamand's criticism on Locke's argument against innate ideas, I. 107, 250.—Alnauld's doctrines on, 80.—Cudworth's, 194, 195.

— Diderot's erroncous estimate of Locke's discoverics, 109, III—views of Gassendi, 73; Hume, 209, Helvetius, 179; Kant, 279, XIII. 48; Leibnitz, I. 128; Locke, 109; Shaftesbury, I18; Voltaire, 251.—remarks concerning, 247.—abstract ideas, II. 52.—Meyer's doctrine of the materiality of, III. 316.—Plato's notions of, 538; XVII. 788.—Condillac's, VII. 234, 236.—innate ideas, XIV. 601.—three stages in the development of, XIII. 595.—material signs of, XXI. 94. See Association of Ideas. Identity, laws of, XIII 572.

on, I. 217—in medical jurisprudence, XIV. 425

IDES, XII. 256; VI. 76.
Idia, genus of insects, IX. 249.
Idicoy, XIV. 527, 528, 588—in Egypt,
VIII. 428.
Idiom, XIII. 188.

Idiosyncrasy, its relation to health, XIX. 607; to the amount of air required for respiration, XXI. 541.

Idleness, diseases arising from, XIV. 442. Idmenia, fossil animals, XVI. 98. Idocrase, mineral, XV. 85.

Idolaters, I. 465.
IDOLATRY, XII. 356—its connection with sculpture. XIX. 846.

sculpture, XIX. 846. IDOMENEUS, XII. 357; VII. 494. Idoteadæ, crustacea, VII. 542.

#### IDR—IMA

IDRIA, XII. 357-quicksilver mines of, XV 237 Idrialite, mineral, XV. 125 Idro (Lago d'), XII. 637, XIII 644. Idsted, battle of, VII 744, IX. 660 IDUMEA, XII 357, VIII 411. IDYLL, XII 359; VIII. 374 See Jena. Ienikale, in the Crimea, VII. 505 Ierax, genus of birds, XVI. 745 IF, French island, XII 359; XIV. 316. IGLAU, town in Austria, XII. 359 IGLESIAS, town in Sardinia, XII. 360. Ign, his logotypy, XVIII 552 IGNATIUS LOYOLA, XII. 360, 750. - (ST), XII. 360; IX. 491-MSS. of, XIII. 393. - (St), bean, V 200 (st), bean, V 200
Igneous rocks, XV 131; XVII 587—
classification of, 155—pethology of, XV
183—m Scotland, XIX 791—as building stones, XX 711. IGNIS FATUUS, XII 360; X. 409; XIII. Ignition of wires by electricity, XXL 626. Ignorance, sins of, XXI 201 Igor, king of Russia, XIX. 469 IGUALADA, Spanish town, XII 360 Iguana, XVII 634; XIX. 33—teeth of, XVI. 434, 435 Iguanidæ, reptiles, XIX. 30 - teeth of, XVI 434. Iguanodon, XVII. 151—teeth of, XVI. 435. 436 Ihre-Oehrling, XVII 585. Ikan-sumpit, fish, XII. 802 Rhsheedees, dynasty of, VIII 478. ILCHESTER, XII 360, XX 411 ILDEFONSO (San), Spanish town, XII 360 ILE-DE-FRANCE, XII 360, X 276. ILERDA, XII 360, XIII 341 Ileum, anatomy of the, III 60—villi of, ib -comparative anatomy of, 111 Hex, V. 199 See Holly ILFRACOMBE, town in Devon, XII 360 Ihac arteries, III 65 Iliad of Homer, XVIII 100. See Homer Ricaceæ, nat. order of plants, V. 199. ILISSUS, river, XIL 861, IV. 170 Ilithia, genus of insects, IX. 219. Ilium, monarchy of, XV 418. See Troy. Ilkley, fountain in Yorkshire, XV. 39: Ill. river, XX, 747 Ille and Rance Canal, XII 361. ILLE-ET-VILAINE, IN France, XII. 361. Illænus, trilobite, XVII. 101, 102. Illecebracese, nat order of plants, V. 193. Illegitimate children, duties between parents and, XVII. 276-number in England, VIII 756, IV 494, in Scotland, XIX. 800—in different countries and towns in Europe, IV 494. See Births. Illiger (Prof.), his classification of animals III. 183; and of the mammalia, XIV 128, 129—on birds, XVI. 730, 819—his works on insects, IX. 11. Illimani, gold of, IV. 824. ILLINOIS, XIL 361; XXL 419-debt of, 428—wines, 888. ILLUMINATI, XII 363; XV. 809 Illuminating power of gases, X. 428. of telescopes, XXL 128. Illumination, artificial, XIX. 615. circle of, X. 481. of microscopic objects, XIV 794-798-of the wires of micrometers, 744, 745-of clock dials, VII. 24. ILLYRIA, or Illyricum, XII 363; XIX. 332—reduced by Juhan, VII. 307; and by Philip of Macedon, XIII. 768. Illyrian alphabet, II. 614—language, IX. 392—coinage, XVI 370. Ilmen, lake, XIX. 516. Imputation of sin, XXI 204, 205, 207. Ilmenite, mineral, XV. 109 IN COMA DOMINI, Papal bull, XII. 866. ILMINSTER, in Somerset, XII 864 Inachus, VII. 712. Inaugural stones; XIX. 750. Iluocætes, genus of fishes, XII. 310. ILVA, or Elba, XII 364; VIII. 521. Inca, genus of insects, IX. 127 Ilvaite, mineral, XV 90. Incandescence, XI 272; XIII 450. Image-breakers, or iconoclasts, XII. 365; Incantation, resorted to by the Romans for the cure of diseases, XX. 812. Incarnation, era of the, VI. 667—ancient XIII. 334, 641. See Iconoclasts. Image-worship, I. 465; XII. 356, 357, 671;

IMA—INC Images, in optics, formation of, by apertures and murrors, XVI 554-by lenses, 567 — form of, by lenses of different sizes, 569 IMAGINATION, XII. 364; XIV 576-incorrectly identified by D'Alembert with abstraction, L 6-its province may be considered narrow when compared with that of observation and reasoning, -Addison on the pleasures of, 161pleasures of, mostly originate in association, 384—the source of apparitions, III 317—fecundity of, in the blind, IV 778-poetic, XVIII. 92-effect of civilization on, 96 Imago, in entomology, IX. 54. IMAUM, or Iman, XII. 364—of Muscat, III. 360, XV 699. Imbattled, in heraldry, VII 491. Imbricate leaves, V 87 IMBROS, or Imbro, island, XII. 364. IMERITIA, IN RUSSIA, XII. 364 Imilcar, VI 282. Imitation in music, XV. 733 - imitative music, 737-phienological sentiment of, XVII, 563. IMMACULATE CONCEPTION, XII 365, XIV. Immediately, VIII. 9. Immersion, in baptism, IV 424, 426. Immorality, a cause of the corruption of Christianity, I. 506, 507, 520. Immortality of the soul, views of the ancients regarding, I 463—only conjectured before the promulgation of Christianity, VI 636, 637-influence of the doctrine in helping to diffuse that religion. 637-Clarke's controversy with Dodwell on, 757-not a necessary attribute of personal existence, XIV. 619taught in the ancient mysteries, XV 754—opinions of Aristotle on, III. 549; of Plato, XVII. 807; Sociates, XX. See Future State, Soul. IMOLA, town in the Papal States, XII. 365. Impact of bodies, laws of, XIV. 414 Impanation, VII. 333 IMPEACHMENT, XII 365; VIII 773. Imperative mood, X. 768 and n. l. Imperator, XIX. 295, 327, 380 Imperial orders of knighthood, XIII 122. Impey (Sir Ehjah), V 509, 514; XI. 494—charges against, V. 529. Imphee, sugar-bearing plant, XX. 798. Implements of husbandry, II 270
Importation, taxes on, XXI 59, 61—effect of restrictions on the importation of corn, VIL 888, 390 Imports, into the United Kingdom, VIII. 734, 735—of grain, VII 397—countries whence, 399, 400—customs-duties on, XXI 59, 61—into the Umted States, 428 Imposition, in printing, XVIII. 540. of hands, XI 205 Impost, in architecture, III. 510. Impotence, causes of, XIV 425. Impregnation, organs of, III. 69-of bees. IV 581, 584. See Generation

IMPRESSMENT of seamen, XII. 365; V.
562, VIII. 776; IX 776, XVI. 106

IMPRISONMENT, XII. 365; XIV. 445 numbers sentenced to, in England and Wales, VIII 750. Improvers of Agriculture, Society of, II. IMPROVISATORI, XII. 366 - female, in Egypt, IL 600. Impulsion, motion from, IV 219; VIII. 322—explained by reaction, 364—of vessels by the wind, XX. 7.

shire, IX, 781.

opinions regarding the, I. 516.

#### INC-IND

Incas of Peru, XVII. 461 et seg .- their government, II. 686. INCENSE, XII 366 INCRBALD (Mis), XII 367-her novels, XIX. 279 INCHCOLM, island, XII 367; IX. 795. Inchgarvey, island, IX. 795 Inchkeith, island, XII. 367; VIII 390—hghthouse, IX. 795; XIII. 475, 476, n. Inchmarnoch, VI. 27. Incidence, angle of, III 143 Incisor teeth, in man, III 25; XVI 409, 417—in the lower animals, III. 107. See Odontology Inclination, of the moon's orbit, IV 33of the planetary orbits, 57, 59—of two planes, in geometry, X 532—of beds, in geology, XV 168 Inclined barometer, IV 454 INCOMBUSTIBLE CLOTH, XII 367; II 716; XV. 81 See Aspestos. Income of the United Kingdom in 1854, VIII 751, ttems from which it is de-rived, XXI 75—effect of war expendi-ture on that of individuals, VII. 190 taxes on, XXI 50 - impossibility of fairly assessing incomes, ib -incomes should not be disclosed, 56 Income-tax, V. 566—repeal of, 590—in Scotland, XIX 809—proposed by Sir R. Peel, XVII 364-apparently an equal, but in reality a most unequal tax, XXI. 50-permicious operation of a graduated, 52-account of the late, ib.; and existing income-tax, 53; returns under, 1b 54-objections to, 55 Incommensurable quantities, X 517; XIII. Incorporation of Universities, XXI 453 Incubation, in reptiles, XIX. 50. INDENTURE, XII. 867; XIV. 346. Independence, declaration of, by the United States, XXI 436-war of, ib INDEPENDENTS, XII 367; IX. 278, XVIII 480-places of worship in England and Wales, VIII. 745; m Scotland, XIX. 801-English in the seventeenth century, V. 408 et seq -their idea of ordination, XVI 704. Indeterminate problems in algebra, IL Inderabia, XII. 372; III. 125 INDEX EXPURGATORIUS, XII. 372; IV. 712; Index to Entomology, IX. 263-to Mammalia, XIV. 239-to the Natural Orders of Plants, V 281-to Ornithology, XVI. 829-to Helminthology, XI 307-registration indexes, XVIII. 835. India, XII. 372; III. 735; XI. 446-metaphysical and ethical remains of. I. 203-arc of mendian measured in, 775, 853; IX 552-architecture of, III. 434 antiquity of the caverns of, 1b -British troops in, 665—early history of, 742— Mahommedan empire in, 743, 746—conquered by Sultan Baber, 746 - rise of British power in, 747—knowledge of the ancients respecting, 752—commerce of, 1b, 753-astronomy in, 785-were its superstitions derived from or communicated to Egypt? V. 272-Mr Dundas's measure respecting, 507—discussion in Parliament in 1788, as to the payment of troops sent to, 528-war with Hyder Alı and Tıppoo, 589, 541-Burmese war, 646, 788—Afghan war, 667—war with the Sikhs, 669, 671—cloth manufactures in, VI. 92—carpets, 270 -castes, 314 - chronology, 676, XIL 789—mode of cooling apartments and collecting ice m, VII. 100, 101—yields no tribute to Britain, 140—as a colony, Imrie (Col.), on the mineralogy of Forfar-148-effects of British dominion, 1b .trade with Europe in the middle ages, 186-discovery of a maritime route to,

#### IND-IND

VIII 1, 2-dyeing, 272, 273-calicoprinting, 314-method of forming ice in, IX 415, XIV. 646—ethnology, IX. 846—Alexander's expedition to, X. 463 XIII. 769—glaciers of, X. 634 — languages, XIII. 194, 195, 206, 207—libraries of, 431-Mill's History of British, XV. 12—geological survey of, 205—miocene rocks, 214—missions established in, 271 -monarchy, 413-mystics, 755-coins, 442, 445; XVI 390-Mohammedanism in, XV. 308-newspapers of, XVI 203state of the press in 1832, 204, and Loid Metcalf's law of 1835, and Lord Canning's of 1857, ib -insurrection of the sepoys, in 1857, 801; XIV 471—ancient philosophy, V 271—hife assurance so-cettes in, XII 413—hall storms in, XIV 659—dust whirlwinds, 685—philology in, XVII 519, parallel between it and that of the Greeks and Jews, 1briver system of, 606—mountains of, 598, their height, 643, 644—great plain of, 610 — earthquakes in Upper and Western, 616—botanical region of, V. 228, XVII 628—discovery of a passage to, X 393; XVIII 382—settlement of the Portuguese in, ib -imports of the precious metals into, 467, 468, 469—exports from, 470—causes of the drain of bullion to, 470, 471-want of mines of the precious metals in, 470-trade with China, 472-precious metals derived by, from China, ib -currency of, impolitic regulations regaiding, ib .- railway statistics, 787-sculpture in, XIX. 848varieties of rice in, 157-serpents, 46, 71, 72, 73—duration of voyage from Britain to, XX. 19—best course to, in passing through the tropics, 20-silkworms in, 288, 289, 295-mesmerism in, 436-steam-boats for the livers of, 664. 665, 666—sugars of, 796—suicide in, 799—woods of, XXI 277—Timour's invasion of, 283—tobacco, 294—Wellington's despatches from, 817—weights and measures, 811-wool, 911-map of, Xi. Plate. See East India Company, Hindus, Bengal, Calcutta, Clive, Hastings, Sepovs. &c.

INDIA RUBBER, XII. 373. See Caoutchouc. INDIAN TERRITORY, in United States, XII. 373.

- corn. See Maize.

cress, order of plants, V 188 cress, plant, V. 91, 188; XI 745 glue, X 684

ınk, XIL 383—drawing in, VIII.

ocean, XVII 576—temperature of,

577—soundings of, 7040 fathoms in, 576—currents of, 579—active volcances ın, XXI. 603.

INDIANAPOLIS, XII. 875, 874

Indianite, mineral, XV. 71

Indians, XI. 541—of Canada, VI. 146—of Bohvia, IV. 828—Mexico, XIV. 718— New York, XVI. 210—Hondinas, XI. 610—in Indian territory, XII 373— languages of the, XIII. 219 et seq.— charge of, in the United States, XXI

429-wars with, 434. Indicative mood, X. 766, 790.

Indicator, in mechanics, XIV. 404sure indicators of gasometers, X. 422—in steam-engines, XX. 596, 644—indicators, diagrams of, 597, 645—measurement of work done in the cylinder form, 601.

genus of birds, XVI. 778.
Indicollite, mineral, XV. 89.
Indiction, cycle of, VI. 81, 678; VII. 607.

Indictions, XIX. 352 INDICTMENT, in law, XII. 375.
Indigestion, in the domestic animals, XXL

188-exports from Britain to, 190-

alleged rapidity of fortune-making in,

196 - cotton manufacture, 487, 447-

trade with Damascus, 640 - ancient

temples and idols, 716-Danish settlements sold to England, 745-diamonds, 565. See Digestion.

18D160, XII. 375; V. 190; VI. 518—in Hindustan, XI. 458—of Bengal, IV. 649—in Arabia, III. 358—Mexico, XIV. 717—Java, XII. 705—Nicaragua, XVL

#### IND—INF

244—Amboyna, II. 660—Corfu, XII. 445 -Persia, XVII, 421-its introduction as a dye-stuff, VIII. 274-its atomic constituents, ib -its use in dyeing, ib indigo test in bleaching, IV. 763-unsuccessful attempts to cultivate it in Russia, XIX. 520.

Individual, its meaning in psychology XIV 557, 587-in natural history, III.

Individuality, faculty of, XVII 563 INDIVISIBLES, in geometry, XII 376. Indo-European languages, XIII. 199, 206, 228; VI. 365; IX. 390
Indo-Germanic philology, XVII. 530, 531

See Arian Languages

INDORE, town in Hindustan, XIL 376sepoy insurrection at, XVI. 310
INDORSEMENT, XII. 376—of bills, IX. 445.

Indragiri, in Sumatra, XX. 806.

INDRE, in France, XII 376. INDRE-ET-LOIRE, in France, XII 377 Indris, genus of mammalia, XIV. 145 INDUCTION, XII 377; XIX. 125-logic of,

L 803—Aristotle on, III. 555—inapplicable to moral philosophy, XV. 538—bearing of syllogisms on, XIII 626 known before Socrates, XX. 398-much employed by him, 399.

electrical, VIII. 555; I. 979-duction coils, XXI. 99 and n. - magnetic, XIV 21

Inductive science, philology an important branch of, XVII 589

INDULGENCE, XIL 377-Luther's opposition to, XIII 724.

INDULT. XII. 378. Induration of building stone, XX, 735 INDUS, river, XIL 378; II 202; III. 735 XI. 488, 450; XIII 149, XVII. 606, 647; XX. 303—passed by Alexander the Great, XIII. 769—his voyage down the, 770—floods of, XVII. 600—valley of, 610.

Industry, stimulated by indirect taxation XXI. 57.

Inertia, VIII. 330—moment of, XIV 412; XIX 481—of air, XVIII. 23—of machines, XIX 437.

Inescutcheon, in heraldry, XI. 330 Infalistatio, ancient punishment, XII

Infallibility, popish doctrine of, XVIII. 318, 886—craving in the human mind for the existence of, I 499—it relieves men from all care and trouble, 500-no such power exists, 527-many cling to the idea that it must be lodged somewhere on earth, 531-existed only in churches under the immediate care of the inspired apostles, 538.

Infancy, XIV. 425. INFANT, in law, XII. 379

Cutch, VII. 598-Gujerat, XI. 92-Japan, XII 690-secret society for, III. 676 — in the South Sea Islands, 677; XVIII. 271—Onde, XVII. 19. INFANTRY, XII. 379. See Army.

Infants, size and weight of, III 2-skulls of, 28, 29-nursing of, XIV. 441 See Fœtus.

Infection, VII. 337-in the plague, XVII.

INFERTMENT, XIL 379.

Inference, in logic, doctrine of, XIII. 601— character and kinds of, ib.—immediate categorical, ib .-- by contra position, 602by contradictory opposition, 608-by contrary and sub-contrary opposition, 604by substitution, ib.—by conversion, 605—of constitution, 606—complex modes of, 629-from premises involving ultrasyllogistic subsumptions, 632-by combination of complex modes, 633.

INFERIÆ, XII. 380; IX. 510, 513. Inferobranchiata, order of mollusks, XV

Infidelity, in France before the Revolution, X. 47. See Atheism, Deism.

#### INF—INN

Infinite series, II. 529. Infinitesimals, method of, IX. 713 Infinitive mood, X. 770. Infirmaries in London, XIII. 673-in Ireland, XII 529. See Hospital. Inflammable minerals, XV. 122. - salts, XV. 125

Inflammation, a disease, XVII 690—treatment of, in animals, XXI. 555—of the stomach and other organs in cattle, 567

Inflatæ, family of insects, IX. 236.

Inflection, in optics, XVI 605
— of nouns, X. 748, 749, XIII 192—
of verbs, 189—whether an advantage or disadvantage, ib

Inflorescence of plants, V. 112-indeterminate, 114-determinate, 115-mixed,

Influenza, VI 332-in horses and dogs. XXI 572

Influx, definition of the word, I 254. Information, in law, XII. 380 INFORMER, in law, XII. 380

Infusoria, III. 193-obscurity of their origin, 175-Lamarck's definition of, 194 -Cuvier's arrangement of, 1b -Ehrenberg's, 211-method of feeding them with coloured substances, 208, n. naked, 199-appendiculated, 202-fossil XVII. 94.

Ingemann (B. Severin), Danish author, XIX. 695

INGENEOUSZ (John), XII. 380—on the electricity of the torpedo, VIII. 573—his electrical machines, 605—on the composition of the atmosphere, IV 180 on the gaseous exhalations of plants, V 104-his opposition to Mesmer, XX.

Inglebert (St), justs of, VI 618. Inglefield (Captain), his arctic voyage in 1852, XI. 40, XVIII 178

Inglis (Captain), anecdote of, at the battle of Camperdown, V 561, n.; VIII. 253, n. 2

on Dublin, VIII. 327-on Galway. X. 389.

Ingolf, his colonisation of Iceland, XII. 197

INGOLSTADT, in Bavaria, XII. 381. Ingots, of gold, VII. 85-of silver, 86, 87. Ingpen (A.), his work on insects, IX. 15.

Ingrafting. See Grafting
Ingrassias (J P), his contributions to anatomy, IL 759.

INCULPRUS, abbot, XII. 381. Inhabitaveness, XVII 562.

Inhibition, in law, XII 381. Inia, genus of mammalia, XIV. 220. Inisfallen, lake, XIII. 73.

Injection of vessels, in anatomy, II. 762organs capable and incapable of, 806injections for domestic animals, XXI

Injunction, in law, XII. 382. INK, XII. 382—black, ib. 383—blue, ib.—sympathetic, 384, VI. 492; VII 545—lithographic, XIII. 510—for transfers, 512—of the ancients, VIII. 42—mef-faceable, XIV. 527—red, XII 383; VIII 287—printer's, XII. 384; XVIII. 545—Indian, XII. 388—modes of effacing, XIV. 427—of ancient palimpsests, XVII.

215—China ink, VI. 599—ink-bag of the cephalopod mollusks, XV. 397. INKERMANN, XII. 384—battle of, ib.; XIX.

INLAND NAVIGATION, XII. 384. See Navigation (inland)

letter office, XVIII. 404.
Inn, river, XII. 384; IV. 516; XX 888. Innate ideas. See Ideas and Locke. Inner Temple, XII. 384.

INNERLEITHEN, in Peebles-shire, XII. 385; XVII. 361.

Innerlochy, in Inverness-shire, XII 437battle of, V. 406. Innervation, function of, XVII. 656, 668-diseases of, 697, 700.

Innes (Cosmo), his Essay on the Ancient Inhabitants of Scotland, XIX. 741, n. 1 on Scotland, 743 et seg.

#### INN-INS

Innis' filtering machine, IX. 582 Innishofin, island, XIV 370 Innismurray, island, XX. 329. Innispatrick, islet, VIII 215 Innisturk, island, XIV. 370

tion of the fifth crusade, VII 526-Inquisition established by, XII 386—his dispute with King John, VIII 676, 677 his proceedings against the Albigenses, IL 447, XII 386; XXI 508

VIII., his bull against the Valdenses, XXI 508

Innocent's day, VI. 541 INNS OF COURT, XII 384, XIII. 672-of Chancery, XII 384-in Dublin, VIII. 223

INNSBRUCK, or Inspruck, Austrian city, XII 386-university of, XXI 492. Innuus, genus of mammalia, XIV 141 Inoceramus, genus of mollusks, XV. 348 -fossil, XVII. 106.

Inoculation, XXI. 503 — Condamine on, VII 230, 231—a remedy for pneumonia, XVIII. 666-its adoption in France, X. 37-introduced into England, XV. 505 Inoperculata, section of mollusks, XV 373. Inorganic bodies, II 747-inorganic constatuents of plants, 384.

Inosinic acid, IX. 758.

Inquest, XII 386. See Coroner.
Inquistrion, XII 386—introduced into
Portugal, XVIII 388—in Spain, XX 465, Lope de Vega, secretary to the Spanish, XXI 532-its sentence on Galileo, X 379, n. 3—endeavours to intro-duce it into Holland, XI 562, 564

Insalivation, XVII 659-organs of, in the lower animals, III. 107. See Saliva. Insane, theatment of, at the beginning of this century, XIV 528—proportion of, to the population, 529—modern treatment of, 537-laws regarding, 538-

pathology of, 535.
INSANITY, XII 391; XVII. 700—its relation to genius and superstition, III. 320-in medical jurisprudence, XIV. 426-a bar to the execution of a criminal, 445—epilepsy with, 535—analogy between it and dreams, VIII. 176. See Mental Diseases

Inscriptions, French Academy of, II. 69founded by Colbert, VII 98—characters of abbreviations in, VI 419— Egyptian, VIII 441-on coins, XVI. 356, 381,

Insectivora, XIV. 150-bones of, III. 80dental system of, XVI 450.

INSECTS, XII. 391—their use in scattering

pollen, V. 153-their injuries to plant 173—in amber, IL 656—of Africa, 218
—Madeira, XIII. 800—of India, XI 457
—stangs of, XIV. 440—means of preventing their injuries to fruit-trees, XI. 758—order of their appearance in the strata of the earth, XVII 92 fossil, 100, 102—eyeless species of, 630—hybrids, XII. 63—insect pms, XVII 713-reason of some kinds being able to walk on the surface of water, XX. 753—noxious species, XXI. 549. See Entomology

Insessores, order of birds, XVI. 747 INSOLVENCY, XII. 891—of the American states, XXI. 441. See Bankruptcy. Inspectors of registration, XVIII. 835. Inspiration, XII. 391-of Scripture, XIX 828; XXI. 217—was language originally given by? XIII. 187.

Insprück, Austrian city, XII. 386. Instance courts, IL 146.

Instinct, XII. 391; I. 404; IV. 576— Paley's view of, I. 225—weakened in animals by domestication, III. 175—in bees, IV. 576 - in insects, IX. 55, pointers, XX. 218, 219.

Instanctive medicine, XIV. 449. INSTITUTE (NATIONAL), OF FRANCE, XIL. 892; II. 64; X. 99, 270—the Comptes Rendus, published by, III. 815—hbrary of, XIII. 408; XVII 282. of British Architects, III. 506.

# INS-INT

Institutes of Justinian, VI. 746. Institution (Roman Catholic), for the Propagation of the Faith, XV 275.

INSTRUMENTATION, in music, XII. 392.

Instruments, musical, XV. 708—telegraphic, XXI. 99.

Insubria, Hannibal's invasion of, VI 294.

Insular languages, XIII. 199, 217 Insulation of a line of telegraph, XXI 97 Insulators, in electricity, VIII 540, XXI 95-in electric telegraphs, ib, 96.

Insurance, XII 393—life, 394—fire, 416— NSUKANOS, All 393—life, 394—fire, 416—narine, 419—at Lloyd's, XIII 530—against fire, in London, 679—in book-keeping, V 23—principle on which founded, XX. 552—average, IV. 322—in the Ionian islands, XII 446. See Annuities, Life, Probability.

Inta, African tribes, IX 352 Intagho, XIX 845, XVIII 520. Integral, or Integrant, XII. 424.
—— calculus, IX. 714, 730.

Integration, problem of, I 644, 645-improvements in, 807—theory of, 822—of binomial differentials, IX 724—by series, 726—of logarithmic functions, 727-of angular or cucular functions, 728.

Integrity of the Scriptures, XIX. 831. Integuments of plants, V. 74. Intellect, Aristotle on, III 549. Intellectual education, XV 810.

faculties, in phrenology, XVII.

theories on the foundation of moral rectitude, XV 548
INTERAMNA, now Terni, XII 424
INTERCALARY, XII 424; VI 77, 79, 665,

669 et seq. Intercession of saints, XVIII. 337

Intercolumniation, in architecture, III.

Intercommuning, letters of, V. 429 and n. Intercostal muscles, their action in breathmg, XVIII 75.

INTERDICT, XII 424, 382. INTERDICTION, XII 424, 382

INTEREST, XII. 424; XV. 426, 427; XVIII. 217, n. 1-simple and compound, XII 432—application of algebra to calcula-tions of, II. 535—tables of increase of L 1 at compound, III. 253, 254lation of, 596—on accounts current, V. 30
—in ancient Athens, IV. 217—in Spain, XX. 491-Turkey, XXI. 384-impolicy of limiting the rate of, VII. 199—in the Ioman islands, XII 446—China, VI. 591—on deposits in savings-banks, XIX. 666-on deposits, not allowed by the Bank of England, XV. 478.

Interference of light, XIII. 450; XVI. 598—fundamental law of, I. 887—of chemical rays, 922—of polarised light, XVI 544—completes the theory of the rambow, I. 898.

Interim, name of a document, XII. 436. Interjections, in grammar, X. 788, 792. Interlacein, XII. 436.

INTERLOCUTOR, XII. 436. Intermaxillary bones of the mammalia,

III 78. Interment. See Burial.

INTERMITTENT FEVER, XII. 436; XVII. 690-cinchona a specific for the cure of, VI. 727.

International law, XIII. 253, 260-necessity for a code of, 282; its construction, 289 -tribunal, 1b -copyright, VII. 360.

Internodes, in botany, V. 78. Interregnum, XII. 436. INTERREX, XII. 436.

Interrogation, point of, XVIII. 685. – in rhetoric, XIX. 133.

Interval, in music, XV. 704. Intestacy, law of, XVIII. 516.

Intestinal worms, III. 175; XXI. 974—Bloch on, IV. 782—intestinal concretions, XVII, 691

Intestines, anatomy of the, III. 60—in the lower animals, 110—their length in proportion to that of the body in dif-

ferent animals, ib.—digestion in the, XVII. 660—excretion from, 667—of in-

# INT-IPO

sects, IX. 25-Oken's views as to the origin of, XVI. 499-obstruction of, in the domestic animals, XXI 568 Ichthyology, Ormthology, &c. Intonation, in music, XII 436.

Intorcetta (Père) on China, VI. 570, 577. Intoxication, VIII. 196. See Drunkenness. Opium, Spirits, &c. Intrenciment, XII 436; IX. 805, 806.

INTUITION, XIL 437; XIV. 556, 577-intuitive consciousness, 560 - intuitive conception, 589

Intussusceptio, disease in the domestic animals, XXI 568 Inuline, V 72

Inundations of rivers, XVII 603, 606, 607, 608-in France, in 1843, X. 217-at Petersburg, XVII. 487-of the Ganges, IV 648; XVII 606—Nile, VIII 428; XVII. 600, 608; cause of, XVL 269 See Deluge

Invasion, means of defence against, XXI. 701

Invention, musical, XV 737.

Inverante, mineral, XV 116.

INVERARY, Scotch town, XII 437-herring fishery at, III 526; IX. 640, 642. INVERBERVIE, Scotch town, XII. 437;

XIII. 839. Inveresk, XV. 744

INVERKEITHING, town in Fife, XII. 437; IX. 546.

INVERLOCHY, or Innerlochy, in Invernessshire, XII. 437-battle of, V. 406.

castle, XII 439.

Inverness, XII 437—vitrified fort near,

VERNESS-SHIRE, XII 438—agricultural statistics, XIX 796, 797, 798—popula-INVERNESStion, 799.

Inverse problem, in perspective, XVII.

Invertebrata, characters of the, III 185their organs of smell, 94—their use as food, IX. 765—no lacteals in, XII 27 order of their appearance in the strata of the earth, XVII. 92-fossil, 95.

INVERTED, in music, XIL 440. INVERUEY, Scotch town, XII 440; II. 84. INVESTITURE, in law, XII 440—of a knight, VI. 615

Invoice and invoice-book, V. 20, 21. Involucel, in botany, V. 114 Involucre, in botany, V. 114, 112 Involution, in algebra, II. 495 Io, probably connected with Egyptian mythology, XL 385, n 9.

Iodic acid, VI 470 Iodides, VI, 453, 470—of ion, 490—carbon, 474-mercury, 498-potassium, 485 -sodium, 486-sılver, 498-zınc, 491lead, 497 - phosphorus, 481.

Chemistry IODINE, XII 440, VI. 469; XV. 64-in plants, V 97—Sir H. Davy on, I 969; VII. 671—poisonous quality of, XIV. 435.

Iodite, mineral, XV. 107.

Ioh, Egyptian deity, XL 383.

Iohte, mineral, XV. 88-optical properties of, XVL 666 IONA, island, XII. 440; VII. 154, XIX.

744, 751.

IONIA, in Asia Minor, XII. 443-coins of, XVI. 376.

IONIAN ISLANDS, XIL 444-weights and measures, XXL 812

IONIC ORDER OF ARCHITECTURE, XII 458; III. 516—its origin, 442—columns, 486modern Italian, 451, 477—Greek, 461, 465—Roman, 475—derived by the Greeks from Assyria, XVL 277.

IONIC sect of philosophers, XIL 458. See Thales, Anaximander, &c.

IONIUM MARE, XII. 459.

Iowa, in North America, XII. 459; XXI 419-debt of, 428-wines of, 888-river, XII. 460.

Ipecacuan, V. 196 -- an antidote to the sting of the scorpion, VIII. 433, n. Ipek, town in Russia, XVII. 501. IPHICRATES, Athenian general, XII. 461. Iponomeuta, genus of insects, IX. 219.

# IPS-IRE

Ipsamboul, IL 74-temple of, XVI. 349. Ipsilante (Prince), XI 23, 25. Ipsilanti (Demetrius), XL 25. Ipswich, town in Suffolk, XIL 461, XX. 790, 791 - proposal for a wool staple mart at, XXI 915

IRAK-AJEMI, Persian province, XII. 461 IRAK-ARABI, IN ASIATIC TURKEY, XII. 461. Iran, plateau of, XVII. 597 Itanians, IX 346.

Irapuato, in Mexico, XIV. 724. Irawadi, river See Irrawadi

Irbit, Russian town, fair of, XIX. 543

IRELAND, XII 462-history of, ib -statistics, 503-Royal Irish Academy, II 67 -Irish alphabet, 616-cromlechs, III 433-bagpipe, IV 365-baronets of, 470 -attempts of James I. to civilise it, 386-rebellion of 1641, 398-under Wilham and Mary, 441 et seq -invaded by James II, 442 -- battle of the Boyne, 1b; VIII 179-treaty of Limerick, V. 443-Irish House of Lords deprived of all right of final jurisdiction, 456-measures in Parliament relative to, in the reign of George III., 507, 516-Irish proceedings as to the regency question, 533-invaded by the French, 480; X. 104, 109-icbellion of 1798, V 563; XV. 528-union with Britain proposed, V 566: carried into effect, 572-disturbances in 1805, 624 - discussions on Catholic emancipation, ib, 625, 631, 638, 640, 642, 652-distress and disturbances in 1822, 634-discussions in Parliament regarding, in 1823, 638, in 1824, 640; in 1825, 642-Catholic association, 641, 642, 647, 653, suppressed, 655-passing of the Emancipation Act, ib -disfranchisement of the forty-shilling freeholders, 656-repeal agitation in 1830, 659 passing of the Reform Act, 663-Coercion Bill, 663—measure regarding the Estab-lished Church in. 664 — destitution in 1847 owing to disease in the potato crop, 670-Smith O'Brien's attempted rebellion, 614-Encumbered Estates Bill, fb —bankruptcy system of, IV. 417—corn-laws of, VII 384—agriculture, 385; improvement in, 392—influence of exportation of corn to Britain from, 391 -amount of the corn exported, 401coronach, 412 - effects of the minute subdivision of land, 429, n., 430—effects of the cottage system in, 431—Cromwell's proceedings in, 612-cotton manufacture, 457-Earl of Essex's expedition to, 762—emigration from, VIII. 651—value of imports into, 734, 735; of exports, 736—shipping, 739, 742—exchange between Britain and, IX. 433fisheries, salmon, 618; sca, 628—horses, XI. 662-office of arms for, 321-royal arms of, 323-sewed muslin trade of, X. 650—rate of interest in, XIL 429variation of the needle, XIV. 53-militia, XV. 9-coal, XIII. 118; XV. 202limestones, 147-Cambrian and Cambro-Silurian rocks, 196, 197-upper Silurian, 198—Devonian, 200—Carboniferous, 201, 202—Perman, 205—Triassic, 206—oolite, 208-chalk, 211-yield of its lead mines in 1854, 246 - monarchy, 413-banks and banking, 487, 488 - money, 435 XVI 388—education, XV. 825—early newspapers, XVI. 184; number current, in 1857, 192-hbraries, XIII. 403-hghthouses, 482-iron ore, XII. 540-parliament of, XVII 292—representative peers of, 293—franchise in, 294—helghts of mountains in, 643-Pitt's policy towards, 740-police of, XVIII. 206-increase of population, 342—poor-laws, 298—post-office, 408—Presbyterianism, 491—registration, 841-prisons, 570-the Reformation in, 829—convicts in, 585—extent of railways in, 784 — railway statistics, 786, 787 et seq.—Scots pre-dominant in, XIX 748—salt produced in, 585-savings-banks, 657 - increase of the duties on spirits in, XXI. 73—quantity of spirits charged with consumption duties, 74-more fitted for

#### IRE-IRO

grazing than tillage, 678-wool of, 907 -Ordnance survey, 333, 334 Map of, XII, Plate. See Dublin, Grattan, O'Connell, Towers (Round), Cork, &c., &c. Ireland (New). See New Ireland. Ireleth rocks, XV 198

IRENÆUS (St), XII 535; IX. 492 —— bishop of Lyon, ministers to the Valdenses in the Celtic tongue, XXI 506 Irene, planet, IV. 91.

IRETON (Henry), XII. 536—his proceed-ings in Ireland. 484.

Iridaceæ, nat order of plants, V 211 Indescence, XV 58.

Iridina, genus of mollusks, XV 349. IRIDIUM, XII. 586; VI 499, XV 113; XVII 622—specific gravity of, XII 88 -discovery of, XXI. 154.

Iridosmium, XV. 113. Ins of the eye, III 43, XIII 461; XVIL

678-in the lower animals, III. 94 - planet, IV. 91.

plant, XII. 536; V 212, XI 750 Iriscope, XVI 603

Irish, population in Glasgow, X. 649-in Canada, VI 145.

IRISH SEA, XII. 536—Irish cross-channel trade with Britain, 521.

Irite, mineral, XV 108

IRKUTSK, in Russia, XII 536, XIX. 521 IRON, XII 538; XV 66—native, 114,

XVII 620-in chemistry, VI. 488general use of wrought-iron, I. 875transmission of sound by, II 101-best kind for anchors, III 121-aqueduct pipes of, 337-canal aqueducts of, 338bridges of, 414, V. 355 et seq; XII its influence on early civilisation, III. 422-compounds of, VI 488-castiron, 489, 490 - meteoric iron, 488; XVII 620-in ashes of plants and in the soil, V. 98-crystallization of ores of, VII 557 et seq —cement for, VI 368 —oxides of, as mordants, VIII 316— protochloride used for discharging colours, 317—for gun-barrels, XI 96—specific gravity of, XII. 88—manufacture of, 538, 544-ores of, 539-conversion of crude into malleable iron, 552strength and other properties of, 566iron-trade, 573—in construction, VII 322—unfitness of cast-iron for guders, 329—cast-iron cutlery, 602—magnetic power of, XIV 3, 9—attracted by magnets 19-effect of masses of iron on the attractive force of a magnet, 20of heat on its magnetic power, 35-production of, 283 — restrictions on the importation of, ib — sparry iron, XV 99 —iron salts, 100—green iron earth, 101—iron salts, 100—green iron earth, 101—iron sinter, 10 —specular, 108—mica-ceous, 10—red, 10—meteoric, XIV. 632, 535—distribution of, XVII. 621—iron roofs, XIX. 395-its first extensive use in ship-building, XX. 137-iron fastenings of timber, 174—for ship-building, ib—strength of, 174, 175, 177, 178— Spartan money made of, 503-durability of, 178-weight, 179-expediency of a duty on exports of, XXI. 61. See Iron Bridges, Iron Manufactures, Iron Mines, Iron Ships.

- BRIDGES, XII 575; III. 414; V. 355—at Sunderland, III 414—Menai Bridge, XIV. 494; I. 875—Britannıs tubular, ib -article on, in this work, by Robert Stephenson, XX, 683.

— Crown, XII. 536 — Napoleon crowned with, XV 794.

- Manufacture, history of, XII. 538processes and machinery employed in, 544, 558—statistics, 573—manufactures of, in France, X. 254—Prussia, XVIII. 669—Birmingham, IV. 731—Brazil, V. -Glasgow, X. 650-Newcastle, XVI. 167—Pennsylvania, XVII 396—annealing of iron, III 218—blueing, IV. 799
—bronzing, V. 677—in Staffordshire,
XX 580—Spain, 490—Carron Ironworks, 708 (see that article)—Tennessee,
XVII 188 XXI. 156—United States, 426. Casting, Cutlery, Foundry, Gun-making, Hardware, Steel, &c.

#### IRO—ISH

IRON MASK, the man of the, XII. 536 XIII 342.

-Mines, of Bavaria, IV 517-Belgium 624—Brazil, V 292—Prussia, XVIII 668—Europe, IX. 386—Scotland, XIX. 804-Malaga, XIV. 107-Derbyshire, VII. 754—Devonshire, 763—Cumberland, 577-Clackmannanshire, VI, 750 -Mexico, XIV 715-England, VIII. 726; XV. 219-Hindustan, XI. 457-France, X 250—Monmouthshue, XV.
498—New York, XVI 215—Norway,
322—Roscommon, XIX 420—Russia,
543—Sweden, XX 862—Switzerland, 889—Shiopshire, 230—Sumatra, 804. See the geographical articles generally - Mountain, in Madagascar, XIII.

period, in archæology, III. 419. Ships, compared with wooden ones, XX. 183 -destructive effects of shot on XVI. 100, XX. 183—for purposes of war, ib .- details of building, 194-specifications for two iron ships, 197, 200.

- sulphate of. See Copperas. Iron-alum, XV 97.

Iron-clay, XV. 83. Iron-garnets, XV. 85.

Iron-pyrites, XV 115-its crystals, VII. 557. Iron-smelters, diseases of, XIV. 443. Iron-stone, clay, XV. 100.

Irony, improper in history, X. 615-much used in conversation by Socrates, XX. 400.

Inoquois, tribes comprehended under that name, IL 680; IX. 347 — language, XIII. 223.

IRRAWADDY, river, XII. 611; V. 778; IV 312, XVI 87, XVII. 607, 647 IRRIGATION, XII. 611—in Afghanistan, II. 202-Arabia, III 344-Cambridgeshire, 737—Tabula, 10 227—Chile, 543—China, 588—Delhi, VII. 705—Egypt, VIII. 427, 428—Lombardy, XII. 622; XIII. 648—Java, XII. 705—Norway, XVI. 325—Peissa, XVII. 421.

Irritability of muscles, II. 822—of leaves, V. 108—Haller on, XI 196

IRTISH, river, XII 623, XIX. 548. IRVINE, town in Ayishire, XII. 623-harbour, IV. 333.

(Dr), on heat, XI 273, 274; I. 761, 926, 927-discovery of specific heat madvertently assigned to him, 927, n 1. Irving (Dr David), XIII 402—his edition of Dempster's Ecclesiastical History, VII. 734-on Composition, XIX. 132, 133.

(EDWARD), pulpit orator, XII. 623. - (Washington), his Life of Columbus quoted, VII. 155 et seg -his historical works compared with those of Robertson, XIX. 231, n.

Irwan, Russian town, IX. 325 Irwell, river, XIII. 177—aqueduct over, TII 338.

Is, bituminous fountains of, IV, 736. See Hit.

Isaac (St), cathedral of, Petersburg, XVII. 490.

Isabella, queen of Edward II., VIII, 682. - IL of Spain, XX. 478 and Ferdinand, XX. 465

Isabnormal lines, chart of, XVII 611. Iszus, Attic orator, XII, 624.

- Roman orator, XII. 624; XIV 95. Isagoras, IV. 198. ISAIAH, XII 624-style of, XVIII. 98.

ISAURIA, XII 626. Iscura, island, XII. 626. ISCHL, town in Upper Austria, XII. 627.

Ischnosoma, genus of fishes, XII. 249. Ischyodon, genus of fossil fishes, XIL 342; XVII. 119.

Isco (Lago d'), XII. 637; XIII. 644. Iser, river, IV. 517. Isère, in France, XII. 627.

- river, iron bridge over, XIL 598. Iserine, XV. 109.

ISERLOIIN, Prussian town, XII. 627. ISERNIA, town of Naples, XIL 627. Iseum, temple of, VIII. 497. Isn, in Scotch law, XIL 627. ISHMARI, XII. 627; III. 861, II. 47.

ISH-TTA Ishnik, or Ismk, XII. 628; XVI. 241. Isidorus of Charax, X. 467. of Miletus, his plan for supporting the dome of St Sophia, III 402 of Pelusium, XII 628 - of Sevilla, 1b. Isinglass, XII 628—as finings for beer, V \$30-its use in clarifying, VII. 755, 756 Isis, Egyptian deity, XII. 629, VIII. 438, V. 706; XI. 321; VII 712—mysteries of, XV. 752. - English river, XVII 36 - See Thames. Iskardom, in Bultistan, XII. 629. Isla (De l'), his 10mance, XIX, 286 DE PINOS, or Isle of Pines, XII - river, IX. 782. Islam, or Islamism, XII. 629 See Mohammedanism. Island, X 483 - emergence of volcanic islands, IV 336, 337—islands of Europe, IX 385-in the Firth of Forth, 795. Islands of the Blest, XXI 26 ISLAY, or Isla, island, XII. 629; XI. 278 ISLE, L', town in France, XII 629. French province, X. 276 — of France. See Mauritius. — of Pixes, XII 629 - of Wight See Wight. Islemge, Turkish town, XX. 39. Ismaeel Bey, VIII 488 Ismaeliyeh, Syrian sect, XX. 908. Isman, in Moldo-Wallachia, XII. 629, VII 654, XIX. 487 - (Shah), XVII. 438 ISMID, in Asia Minor, XII 629 Isnaidi (F), his work on insects, IX. 22. Isne, in Egypt, VIII 518-zodiac at, ib Isoarca, genus of mollusks, XV. 349—fos-sil. XVII 106. Isocardia, genus of mollusks, XV 150 Isochionism, in pendulums, VII 3 ISOCRATES, XII. 629; XVII 789; XX. 379, 395 Isodus, genus of fossil fishes, XVII 125. Isogcothermal lines, XIV 664 Isola bella, V 54

Madie, V, 55 ISOMERISM, XII 630, VI 450, 503. ISOMORPHISM, XIL 630; VI. 445, 446; XV. 62 Isoperimetrical figures, I 643 and n.— problems, V 36; IX. 675, 676—Bernoulli's problem of, 1V 672 Isopoda, crustacea, VII 542-fossil, XVIL Isopyre, mineral, XV. 82. Isosceles triangle, X. 507 Isotheral and Isochemal lines, V 220; XIV. 664; XVII. 611. ISOTHERWAL LINES, XII 630; V 220; XIV 664-Humboldt on, VI. 771; L 993; VI. Plate. ISPAHAN, Persian city, XII. 630, 461-bazaars of, IV 525. ISRAEL, a name of Jacob, XII. 631-land of, XVII, 181, ISRAELI (Isaac d'), XII. 631. Israelites, the date of their exodus, VIII. 458—their passage through the Red Sea, XVIII. 819-their proneness to idolatry. I 464 See Jews ISSORE, town of France, XII 632. ISSOLDUN, town of France, XII. 632, 377 ISSUS, XII. 632—battle of, XIII. 767. genus of msects, XIL 169. ISTALIF, town of Afghanistan, XIL 632 ISTIMIA, festival, XII. 632 — Isthmian games, X. 397, 398 Isthmus, X. 483 Istiurus, genus of reptiles, XIX. 32 Istius, genus of fossil fishes, XII. 347. Istmo, in New Granada, X. 797. ISTRIA, XII 633; XIII 309 Istims (Count Capo d'). See Capo d'Istua (John). Isurus, genus of fossil fishes, XII. 345. Itacolumi, mountains, II 670, V. 292 Itala version of the Scriptures, XIX. 840. Italian bibles, IV 701—hours, VII 796. Italians, their imaginative and reasoning powers, I 203—skulls, III. 29.

ITA-IVY ITALY, XII 633, IX. 403-metaphysical writers of eighteenth century, I 201first European country that cultivated algebra, II 484 - collections of bonmots or Ana, 740-cultivation of anatomy, 735 et seq .- modern architecture of, III 447, 449, 477, 517-pointed aichitecture, 448-domestic architecture, 473-influence of its architectural school -commerce with Asia in the middle ages, 754-Austrian dominions in, IV 308, 309 - Bonaparte's campaigns, V. 558; X 99 et seq; XV 786 et seq—
effects of the French occupation of, V 65-Hannibal's invasion of, VI 293 XIX. 310-cotton manufacture in. VII 440-insurance originated in, XII. 394 -its condition at the time of the Crusades, VII 529—trade with England, VIII 732, 733—revival of the drama, 143-tragedy, 147-comedy, 148-condition of the Jews in, XII 781, 783historical writers, XI 548 - libraries, XIII. 410—fairs, IX. 469—affairs of, in 1800, X. 116-miocene rocks of, XV. 214, phocene, 215-metallic produce of, 248 — monarchy in, 413 — M. Guizot's policy towards, X 230—newspapers of, XVI 202—coms of, 358, 362, 387, 389number of insane, compared with the population, XIV. 536-schools of painting, III. 709, XVII 61, 81—revival of classical studies in fourteenth century, 523 - heights of mountains in, 643poetry of, XVIII. 109-political economists, 220-porcelain factories in, 438the Reformation in, 828 - sculpture, XIX. 858 et seq -- romance, 265, 284revival of art in, 859-roads, 228-silk produced in, XX. 278-surgeons, 819masonry, 711—universities, XXI. 448. -wines, 886 - woollen manufacture, 913—map of, XII Plate See Italian, Papal States, Two Sicilies, Lombardy, Rome, Naples, &c. Itata, river, VI 543 ITCH, XII. 663-its connection with acan, III. 387. Itchin, river, XI 203 ITHACA, island, XII. 663, 452. - town, XII. 663 Itineranes, ancient, X 463 ITIUS PORTUS, XII 663. Ittnerite, mineral, XV 75. ITURBIDE (Augustin), XII 663, IL 702, XIV 709-711-his death, 712 ITURUP, one of the Kurile islands, XIL Itzcoatl, Mexican king, XIV 701. ITZERIOE, town of Denmark, XII, 663 Iulus, genus of myriapods, XV 748, 747. Ivan VI, reign of, XIX. 482. - Vasilivitch, XIX. 472 Vasiliivitch, II. XIX. 473. Ivel, river, XI. 359, VIII 111 Ivelchester See Ilchester IVES (St), town in Huntingdonshire, XII, 663. - in Cornwall, XIL 663. Iviza, or Ivica, island, XII. 663.

Ivorx, XII. 663; XVI. 474, 476—skill of the Chinese in carving, VI. 586—of different animals, III. 105—specific gravity of, XII. 89-mines, II. 630-vegetable, V. 214—photography on, XVII. 551.
——BLACK, XII. 665. Coast, IL 227; XL 89. shells, XV. 387.

—— (JAMES), XIL 665; I. 823—his theorem on the attraction of ellipsoids, 1b -on atmospheric refraction, 1b -his estimate of the earth's ellipticity, 777completed the demonstration of the earth's figure, IX. 552-on the orbits of comets, VII. 169-on the earth's figure as determined by hydrostatics, IX. 565, 570-his death, I. 824-character as a mathematician, ib.

IVREA, town and province in Northern Italy, XII. 665; XIX 640 Ivry-la-Bataille, XII 665. IVEY-SUR-SEINE, French village, XII. 665, IVX, XII. 665; V. 195.

# IVY-JAC

Ivy, order of plants, V 195 Iwan (Prince), VL 335. IXION, XII 665. Ixodes, genus of arachnides, III 388. Ixolyte, mineral, XV. 124 Ixos, genus of buds, XVI 752 Izard, quadruped, among the Pyrenees, XVIII 700. Izarn (M.), on meteorolites, XIV 633

Izmid, XII. 629. J J, letter of the alphabet, XIL 666. Jabbock, river, XVII. 188 Jablonski (Paul Ernest), orientalist, XII 666-his Hebiew Bible, XIX. 835 Jablonsky (C. G), his work on insects, IX 7 Jaca, Spanish city, XII 666 Jacamar-aleyon, bird, XVI 774 Jacamars, birds, XVI 774 Jacamerops, genus of birds, XVI 774 Jacana, bird, XVI 807 Jacchus, genus of mammaha, XIV 144. Jacini (Signor), his work on Lombardy, XIII 646 Jacintha, genus of mollusks, XV 380-J. fragilis, ib. Jack-fruit, V. 206. Jackal, XIV. 164 Jackdaw, XVI 764 JACKSON (Andrew), president, XII. 666 XXI 441 - (Charles T), on Lake Surerior, VI 122. -on the geology of the United States XV 239 (JOHN), portrait-painter, XII 666 (Mr), his watches, VII. 28 (Mr), on wood-engraving, XXI 903 (WILLIAM), musician, XII. 667.
(Port), IV. 271, 273; XX. 895shark, XVI 424 town, in Mississippi, XII 667; XV. town, in Michigan, XII 667-state puson at, XIV. 740. JACKSONVILLE, in Illinois, XII 667, 361, 363. ın Florida, IX. 667. Jacob, son of Isaac, XVII 192 (Henry), early Independent, XII 369 on the piecious metals, XVIII. 459, 460, 466. (William), on the state of agriculture in Europe, II. 252—on the foreign corn-trade, VII 402 (ST), Swiss Hamlet, XII. 667—battle of, XX 844. Jacob's stone, XII. 463. Jacobi (C. G. I), mathematician, I. 822, 823 (F HEINRICH), XII. 667 (M H), his application of the principle of the rheostat, I. 984-his volta-

type, 987; XXI 635-on the applications of electro-magnetism, 643, 641—on magneto-electricity, 645, 646—his agometer, Jacobinism, X. 122 JACOBINS (the), XII. 669, X. 49 et seq.;
XIX. 234, XXI. 14. - religious order, VIII. 99 JACOBITES, XII 669. - or Syrians, religious sect, in Syria, XX. 909.

Jacobs, on the precious metals, VII 191. Jacobson (Mr), on the lethargy of reptiles, XIX 15.

JACOBUS, gold coin, XII. 669. Jaconets, VII 449.

Jacotin (M), on the superficies of Egypt, VIII. 420 Jacous, birds, XVI 785.

Jacquard (Joseph Marie), his career, XXI 785—description of his engine, 786 mode of setting it, ib.—his loom applied to lace-making, XIII. 143; to net-making, XIX 94.

# JAC-JAM

JACQUERIE, XII 669, VI 619, X. 19. Jacuhy, river, XIX 176.

JADE, ornamental stone, XII 669; XV. 82. Jaeger (Prof), on a fossil reptile, XVII.

- (M), on the electric pile, XXI. 619. JAEN, in Spain, XII. 670; III 124, XX 493.

JAFFA, or Yaffa, XII 670, XVII 197taken by Mahommed Bey, VIII. 488—massacre of, XV 792, n., XVII. 198 Jaffiei (Meer), XI. 484, 486. Jafna, city in Ceylon, XII. 670. JAFNAPATAM, district in Ceylon, XII 670 Jager (B), his work on insects IX 15 JAGERNDORF, Austrian town, XII. 670. Jagers, bilds, XVI 813 Jagery, Indian sugai, XX 798, 796 Jaggard (Isaac), printer, XVIII 538. JAGHIRE, XII. 670, XI 513

Jago Cock, XVI 789. Jaguar, XIV 169; V. 294, XVII 632— represents the tager of the Old World,

Jahan (Shah), garden of, XVIII 690. Jahanjii, mausoleum of, XVIII. 690 Jahrejahs, Indian tribe, XI. 92-their practice of infanticide, ib

Jains, tace of Hindus, XII. 670, XI. 468 —temples in Gujerat, 92, VI 112; and at Ajmeei, XI. 477—in Canara, VI

Jalalean era, XVII, 437 Jalandar Doab, in the Punjab, XVIII 687

-city, 690 Jalap, XII. 671, V 201 JALAPA, Mexican town, XIL 671; XIV. 726

Jalanine, XII, 671. Jalisco, Mexican state, XIV. 724, 718. Jamaica, XII 672-state of, in 1795, V. 557—thunder-storms in, XIV 663 pepper, XVII 710-attempts to grow mulberry-trees and produce silk in, -its condition since the aboli-XX. 295 tion of slavery, 327—Sloane's Natural History of, XX. 333

Jamb, in architecture, III 510 Jamb-linings, in joinery, V. 752 James, son of Alpheus, XII. 683. - son of Zebedee and Salome, XII.

Epistle of, XII 683

(St), of the Sword, XII 683. (St), palace of, XIII 668 (St), park, XIII 668 I of Scotland, XII 688; XIX. 757

—assassination of, 758—alchery en-couraged by, III. 425—his poetry, XVII 120

- II of Scotland, XII. 683; XIX. 758 -his attachment to Edinburgh, VIII. 390.

- III of Scotland, XII 683; XIX. 760-Edinburgh in the reign of, VIII. 390

IV of Scotland, XII. 683; XIX. 763—Edinburgh in the reign of, VIII. 391-his adventure at Cramond, VII. 479-large ship built by, XX 126-his death at Flodden, IX 665; VIII. 698.

V. of Scotland, XII 683; XIX.
766—his knowledge of Latin, IV. 633, n.

6-Edinburgh in the reign of, VIII. 291

- VI. of Scotland and I. of England. XII. 683; XIX. 784, 786-his visit to Tycho Brahe, V 265—G. Buchanan preceptor to, 718—Calderwood's inter-view with, VI. 72—University of Edinburgh founded by, VIII 399; XXL 481—Edinburgh in the reign of, VIII. 391—his visit to that city in 1617, 391 -free-masonry under, XIV. 838. See next article.

— I of England, and VI of Scotland -reign of, V. 381—character of, 388— Archbishop Abbot's flattery of, II. 15—archi-archery in his reign, III. 425—architecture, 454 creation of baronets, IV. 469; VI. 623—translation of Bible, IV. 703—his Irish policy, XII 479, 480—his treatment of Calderwood, VI. 72—his

#### JAM-JAR

navy, XVI 92-state of naval affairs in the reign of, XX 127—his embassy to Sweden, 848 See the preceding article James II of England, XII 683-his reign, V 484—abdication, 489—expedition to Iteland, 442, XII 489—death, V 445 his residence in Edinburgh when Duke of York, VII 629, VIII 392-appointed Lord High Admital, 85-his Pathament in Dublin, 218-his Insh policy, XIL. 488—his navy, XX. 131

- (G. P. R), novels of, XIX 281 (Mr), notice of his mission to Ashantee, III. 725

(M1), his History of the Worsted Manufacture, XXL 959, 918.

- (Su Henry), superintendent of the Ordnance Map Office, XX 452-on the use of zincography and photography in preparing the maps, XXI 336, 337.

RIVER, in United States, XII 683, XXI 597-James River Canal, 754 Jameson (Dr), on the tea-plant in India,

- (George), painter, XII 684 (ROBERT), professor of natural history in the University of Edinburgh, XII. 684-pupil of Werner, XXI 834 on the Trepang of the Chinese, 985 Jamesonite, mineral, XV. 119

JAMESTOWN, in St Helena, XII 685, XL

JAMIESON (Dr), XII 685-on the songs of northern nations, IV 396—on the Scot-tish language, VIII. 797—on Barbour, IV 433, 434—his definition of blackmail, 740.

Jamin (M), on the polarisation of light, I. 920—on optics, XVI 550, 605, 680, 687—lifs improvements on flint-glass • for telescopes, XXI 122.

JAMYN (Amadis), French poet, XII 685 Janassa, genus of fossil fishes, XII. 342. Janeiro. See Rio Janeiro.

JANESVILLE, town in Wisconsin, XII 685. Jam, his character of Alexander Cunningham, VII. 586.

Janiculan Hill, in Rome, XIX 356, 357 Janizaries, XII. 686; III. 656-institution of the, II 785-origin of the name, XXI 368-their instruction in European tactics, 373-destruction of, 374. Jansen (Cornelius), XII 686

- (Zachary), alleged inventor of the telescope, IL 87, n. 3; XIIL 449, XVI 527 - compound microscope. structed by, 529

Jansenists, their opinions on predestina-tion, XVIII 479.

JANSSEN (Cornelius), painter, XII. 687. JANSSENS (Abraham), painter, XII 687. - (VICTOR HONORIUS), painter, XII

687. Januarius (St), XII. 687—liquefaction of his blood, IV. 789.

JANUARY, XII. 687, VI 77 et seq.-gar-

dening calendar for, XI. 758. Janus and Jana, Roman deities, XII. 687 -temple of, 688; XIX. 332.

JAPAN, XII 688-temples and idols, VII. 716, 718-monarchy in, XV. 413-language, XII. 217 — peacock of, XVI 786—Kæmpfer's History of, XIII 31 paper, XVII. 250-serpents of, 634height of mountains in, 645, 646-silk, XX. 277—tea in, XXI 81, 88, 89-

Japanning, XII. 699. Japheth, son of Noah, sons of, VIII. 45. Jaquelot (M1), on Leibnitz's theory of pre-

weights and measures, 811.

established harmony, L. 124. Jar, electrical, I. 737; VIII. 526, 611. Jarbas, VI. 280.

Jardine (James), his Edinburgh waterworks, III. 387; XII. 135-on the temperature of Scottish lakes at different depths, VI. 777 - on hydrodynamics, XII. 76 - on determining the point where a river ends and a firth begins, IX. 600.

(Sir William), on the great lake trout, III 156, n. 2, 157—his Ichnology of Annandale, XV. 205; XVII. 153—on

#### JAR-JEK

birds, XVI. 733, 753-on the Vendace,

Jaigon of Ceylon, specific gravity of, XII

Jariyas, Nepaulese tribe, XVI. 144. Jarmuck, river, XVII 188 JARNACK, town in France, XIL 699 Jarnowick, musician, X. 631 JAROSLAV, O1 YRIOSlaff, in Russia, XII. 699 XIX. 521

JAROSLAVI, town of Russia, XII 700. JAROSLAW, XII. 700 Jana-war-nang, bnd, XVI 748.

Jamah, timber tiee, XX 173, XXI. 278. JASHER (Book of), XII 700. Jasminaceæ, nat order of plants, V 199 Jasmine flowers, in pyrotechny, XVIII 707.

Jason, XIV 420; XIII, 117-statue of. VIII Plate

Jaspei, XV 69-opal-jasper, ib Jassus, genus of insects, IX 170. Jassy, Moldavian city, XII 700 JASZ-APATHI, town of Hungary, XII 701 JASZ-BERENY, town of Hungary, XII 701. Jatrobdella, genus of annelides, XI 306 JAUER, town of Prussian Silesia, XII 701. Jaundice, disease among cattle, XXI 570 JAUTS, XII 701, XI 464—of Beykaneer, 690-of Bhurtpore, 693-of Sindh, XX. 305

JAVA, XII 702-spiders' webs in, III 375 -commerce of, 757-bats of, XIV 147 -weasels of, 158-Hindu temples in, V. 275-extraordmary cloud in, VII 39language, XIII 207—number of vol-canoes in, XVII 589, XXI 605—flora of, V. 228; XVII 628—number of serpents in, 634-height of mountains in, 645, 646—reptiles, XIX. 53 et seg — sugar of, XX. 796—ti ade with Sumatra, -weights and measures, XXI 811

- Little, island, IV. 395. Javan and descendants, VIII 45. - poison, XIV 438

Jaw-bones, in man, III 21, 23—in the mammalia, 78, 79—in birds, 85—muscles of the, 39.

Jawar Dagh, Synan mountains, XX. 902. Jaws, of insects, IX. 32—of fishes, XII

JAMARTES, river, XIL 711, XIIL 77, XIX 549.

Jay (John), American chief-justice, XXI 438-his mission to England, 758 WILLIAM, D D), XII 711
Jays, birds, XVI. 764.

JEAN D'ANGELY (St), French town, XII

712. Jean-le-blanc, bird, XVI. 743

Jeakes' patent grate, XX 354
JEBAIL, XII. 712. See Djebail. Jebb (Sir Joshua), XVIII. 582. Jebel Assoud, IX. 528.

Jed, river, XIX. 453. JEDBURGH, Scotch town, XII 712; XIX 453. Jedda, massacre at, in 1858, XXI 376 Jeddo, or Jedo, Japanese town, XII. 712,

690, 692-earthquake at, 689 JEFFERSON (Thomas), XII 712; XXI 438,

439, 756 et seq. —— CITY, XII 715. Jeffersonite, mineral, XV. 81. Jeffery's marine glue, X 684; XX. 190.

JEFFREY (Francis), Lord Jeffrey, XII. 715 —on Keats' Endymion, XIII. 57—on Campbell's poetical genius, VI. 126—his quarrel with Moore, XV. 530—his review of Wordsworth's poetry, XXI. 931—on the character of Watt, 777. (Mr), on Hawick moat, XI. 246—his

history of Roxburghshire, XIX. 452, n. JEFFREYS (George), Lord, judge, XII 719; V 435—his trial of Richard Baxter, IV.

521—his "bloody assize," VIII. 107.
Jegher, wood-engraver, XXI. 904.
Jehan (Shah), XI. 479; VII. 706. Jehangeer, mausoleum of, XIII. 158. Jehoshaphat (Valley of), XII. 786. Jehovah, XXI. 188. Jejunum, III. 60.

Jekaterinoslav, VIII. 520.

#### JEL-JES

JELALABAD, city of Seistan, XII 719 town of Afghanistan, XII 719—defence of, by Sir R Sale, V 668, XI. 509

JELATMA, Russian town, XII 719. JFLFTZ, Russian town, XII 719 Jelizabetpol in Georgia, VIII 634. Jehzabetgiad, in Southern Russia, VIII 634

Jelum, or Jilam, river in the Punjab, XII. 63, XVIII 687, 688 Jellachich (Bam), IV 307 Jelly, X 445—sea-jellies, XXI 995 Jemaleddin, Arabian author, VI 242 JEMAULABAD, town and fortress in India,

JEMMAPES, XII. 719-battle of, V 544 X. 71

JENA, German town, XII 719-battle of, X. 143—university of, 592, XXI 492 Jensson-Walworth (R von), his works on insects, IX, 18

Jenkin (F.), on electric telegraphs, XXI. 95, 97, 114, n

Jenkins (William), his coal-burning locomotives, XX. 358

Jenkinson. See Liverpool, Earls of JENNER (D1), XII 720—pupil of J Hunter, 27—his discovery of vaccination, XXI 500; held that cow-pox was small-pox modified, 1b.

- on intestinal worms, XXL 976. Jennings' lock, XIII. 539 - draining pipes, VIII 129,

Jenny, spinning, III 609; VII 441; XX. 510-mule, VII 445; XX. 510 Jenour (M1), wire-cartridges invented by, XX 214.

- (M1), on the lizard, XIX. 30 Jensen's marine governor, XX 654 Jenson (Nicholas), printer, XVIII 532 JENYNS (Soame), XII 726-Dr Johnson's review of his Inquiry, 798

Jer-falcon, XVI 745 Jerboa, in zoology, XIV 184 JEREMIAH, prophet, XII. 726, XVIII. 98. Jerez, wine district of, XX. 489 JERICHO, XII 727—plain of, XVII 166 Jeiningham (Capt), his anchoi, XIII.

JEROME (St), XII 727-alphabet of, II 614—his arguments against the superiority of bishops to presbyters, XVIII. 483 -his version of the Bible, IV. 701, XIX. 840

—— of Prague, XII. 728, 59 Jersey, XII 729—breed of cattle, II. 342 -harbour of refuge at, XI. 222-attacked by the Butish in 1779, V 488.

—— city, in New Jersey, XII. 731 Jerubbaal, X 621

JERUSALEM, XIL 731-taken by Antiochus, 769; XVII 193; by Pompey, 770; 194—destroyed by the Romans, XII 774, XIX. 339; XVII 194—1e-bult by Hadrian, XII 775, XIX. 343— Julian's attempt to rebuild the temple, II. 644; XII. 776, XVII. 195-taken by the Petsians, ib; by Omar, 196; by the Crusaders, ib, VII 525; by Saladın, ib; VIII 481, XVII. 196—letaken by the Crusaders, 197 - sacked by the Khansmans, ib .- taken by the Mamelukes, ib -under Schm I , 198-patria ch of, XI. 36—monachy in, XV. 413—walls of, IX. 814—return of the Jews to, XII 767—kings who reigned in, XVIII. 193—tilnerary, X. 463. See Crusades, Temple of Jerusalem. cotton, IV. 525.

Talmud, XXI. 15, 16—Targum, 23 Jerusalem Artichoke, XI. 739; II 321; IX 760.

JERVIS (Sir John), earl St Vincent, XII. 748—his naval victory, V 559. JESI, Italian city, XII. 749. Jesse (Mr), on eels, XII. 230. JESSELMERE, in Hindustan, XII. 749. Jesses, in falconry, XI 248. Jessop (Mr), his account of peas-blossom

damp, VIL 648. JESSORE, in Bengal, XII. 749; IV. 651 Jessup's iron bridges, XIL 582

#### JES-JEW

JESUITISM, XII 749-in Brazil, V 281 et seq.—in Peru, XVII 471—Paraguay, II 691, 692, XVII 268—Japan, XII. 697-Polynesia, XVIII 269sion of, in Fiance, X 36, 37—Pascal's exposure of, XVII 330 See Jesuits.

Jesuits, then method of reducing the indigenous Americans to a settled mode of life, II. 687, 691—then opposition to Pascal's discoveries, IV 450, 451-pioceedings in France in reference to, X. 223-their influence in France, in the reign of Chailes X, 189 - founders of the society of, XII. 750—its early fathers, 751—then opinions on predestination, XVIII. 479-then missionary exertions, XV. 275. See Jesutism, Jansenites

Jesui's bark See Cinchona.

JESUS, XII 757-alleged letter of to Abgar. II 40-date of his birth, VI 667, 669years between Adam and the birth of, 669 — dæmons cast out by, VII. 618 — Gnostic conception of, X. 687 — pictures of, XVII 59, XII 764, 765 opinions of Malioinmed regarding, XV. 303-the Messiah, XXI 207-the person of, 208 - reference to, by Josephus, XIII 9-doctrines he taught, I 481his person the temple of the Lord, 483 —understood by the Jews to lay claim to a divine character, 486 See Christ, Messiah, Theology

Order, or Society of. See Jesuitism. the son of Sirach, XII 765, VIII.

Jesus' College, Cambridge, XXI 465-its foundation, II. 453-Oxford, XXI 459. Jet, XV. 123.
Jets of water, XII. 129, 156—jets of file, XVIII. 707.

Jetsam, IX. 668

Jetties, in rivers, XVI 67 Jetzer, tragic fate of, VIII 100 JEWEL (John), bishop, XII 765. See Gem and Jewellery

Jewellery, manufacture of, m France, X. 255-cements for uniting articles of, VI. 368-universal use of, in India,

XVIII 470.

Jews, XII 766-history of, XVII. 193belief of a future state among, I 475, 476—their expectation of the Messiah, 480-notion of then national pre-eminence, 485, 489-distinguishing features of the gospel very unlikely to occur to, 489 - fuvolous regulations regarding worship, 497-in the different countries of Europe, IX. 395, in Abyssinia, II. 56, Alexandua, ancient and modern, 470, 473, Alabia, III. 362, Austria, IV 217; Algiers, II 566, Bukhara, V. 758, the Crimea, VII. 504; Egypt, VIII. 449, 472, England, 675; XII. 428; Germany, X. 588, Frankfort, 288; Greece, XI. 20; India, 464, Holland, 588; Ioman islands, XII 447; Italy, 634, Morocco, XV 597; Hamburg, XI 199; Jerusalem, XII 747, in the Two Steihes, XX. 255; Poland, XVIII 160-agriculture, II 219-pumshment of adultery, 156-their aliars, 631; III. 433—analogy of Jewish and Mexican cosmogonies, II 695—then assistance to Demetrius, III 273-demonology, 221—architecture, 439—baptism, IV. 422, 423—beard, 527—use of bells, 628 —bibles, 694 et seq.—burials, V. 774—Babylonish captivity, VI 226—Caraites, 228; VII 504—the Chinese not descended from, VI 557—were they long agnorant of a future state? 637, 638 their enmity to the Christians, 640their year and enas, 669—months, 670—circumcision, 732—coins, VII. 66—diversity of complexion in different parts of the world, 225-hours, 796-house built by Henry III. for converts, 338weights and measures, 580—belief in demoniac possession, 617; and magre, XII. 761—dancing, VII. 645—their connection with Egypt, VIII. 488; expenditure that the state of the

dus thence, ib.; policy towards, 459-

#### JEW-JOH

law of divorce, 67-places of worship in England and Wales, 745-severities of Ptolemy Philopater towards them. 469—then fasts, IX. 489—funeral rites. X. 342—geometry, 503—burning of incense, XII. 366—Josephus's History and Antiquities of, XIII. 10—jubilee, 14 hbraries, 382—treatment of the hair, XI. 182—mourning, XV 667—oaths, XVI 398—oracles, 699—monaichies, XV. 413-ancient art, XVII 47-se verities of Antiochus Epiphanes to-wards, 193—art of writing among the ancient, 401—philology among, 521 passover, 333 — patriarchs, 342—their admission into parliament, V. 672; XVII 295 - primogeniture among XVIII 515-in Prussia, 664-poetry of, 97—law concerning rape, 806—persecuted by Tiajan, XIX. 342—conquest of, by Hadrian, 348-sanhedrim, 600emancipation of, in Russia, 492, number in that kingdom, 529, 528-manner of observing the Sabbath, 561, 562their care in preserving the integrity of Old Testament Scriptures, 831-their expulsion from Spain, XX. 465 - Dr Spencer on their ritual, 504 - synagogues, 898; I. 490—slavery, 319—their surgery, XX. 809, 816—in Syria, 909 in Turkey, XXL 378-tabernacle, 1 Talmud, 15-measures, 804 See Hebrew, Jerusalem, Mosaic Dispensation. Caraites, Talmudists. JEW's-HARP, XII 784

JEYPOOR, in Hindustan, XII. 784. JEZIREH-EL-OMAR, town in Asiatic Turkey, XII. 784 JEZREEL, town of Issachar, XII 784-

valley of, XVII. 183 JHALAWAN, 111 Beloochistan, XII. 784. JHANSI, town in Hindustan, XIL 784: V. 763-sepoy insuricction at, XVI. 310.

Jharejah Rajpoots, VII. 598. JHUJHUR, in Hindustan, XII 784. Juxlum, or Jelum, Inver, XII 785.
Jidda, or Djidda, Arabian seaport, XII.
785—commerce of, III. 855; XVIII.

818. Jig, dance tune, X. 622. Jihon. See Oxus

Jilam, in the Punjab, XVIII. 690, 691. See Jhylum. Jionpoor, in Hindustan, XII. 785.

JITOMIR, Russian town, XII 786 Joachim, I and IL, electors of Branden-

burg, XVIII. 647. JOAN OF ARC, XII. 787; III. 399; X. 23: XVI. 722.

of Kent, VII 483. (Pope), XIL 786. JOANNES, island, XIL 787.

Joaquin (San), river, VI. 96.

Jos, Book of, XII. 787; XVIII. 98—
scene of, XII. 359—his description of
the war-horse, XI 656—Targums on, XXI. 24.

Joceline, bishop, X. 646 Jochanan (R), Jerusalem Gemara said to to have been written by, XXI. 15. Jockey, XI. 686 et seq.

Jockeyship, XI 686.

JOEL, the prophet, XIL 788—style of, XVIII. 98. Joffied, abbot of Croyland, XXI. 460.

Joggles in beams, XX. 767. Jogues, religious sect, XII. 788 Jogues, Hindu eras, XII. 788. JOHANNA, island, XIL 789

JOHANNISBERG, German village, XII. 789 -vineyards of, XV. 801; XXI. 885qualities of their wine, ib. Johannite, mineral, XV. 98.

JOHN THE BAPTIST, XIL 789-death of, III. 275.

- (Don) of Austria, Turkish fleet de stroyed by, at Lepanto, XXL 369
emperor of the East, VII. 316.

king of England, XIL 792: VIII. 676—his proceedings in Ireland, XII. 469—his fleet, XVI. 89; XX. 120—king of France, XII. 792; X. 18. name of 23 Popes, XII. 791.

JOH-JOI

John of Ardern, XX. 817. of Gaddesden, XX. 816.

of Salisbury, XII 792 I, II., kings of Castile and Leon,

XII. 792.

L, II., III., IV., V., VI, kings of Portugal, XII. 792; XVIII. 382, 383, 386, 388, 389

I. II. III. kings of Sweden, XII 792; XX. 847

VI. (Don), V 286

(Presbyter), XIX. 98. (St) the Apostle, XII. 790—Gospel of, 1b—Epistles of, 791—Apocalypse, or Revelation of, III. 297, XIX. 98 - (St), knights of, XIII. 114, XIX.

John's (St), College, Oxford, XXL 459 Cambridge, 466

(St), in Newfoundland, XVI 171 (St), town in New Brunswick, XVI -river, 162, 163.

(St) wort, nat order of plants, V 196

JOHN, or JAN (St), West Indian island, XII 792

Johnius, genus of fishes, XII. 285 Johnson (E C), on typography for the blind, IV 781

(Dr George), his work on mollusca,
XV 328—his article on zoophytes in the seventh edition of this work, XXI. 974-his work on British zoophytes, 1002, n —on sponges, 1008—on the annelides, XI 300, n. 2

(Dr James), instance of coincidence in discovery related by, XX. 811, n - (Henry), his logographic printing,

XVI 187. (Hester), XX 871, 873.

(John), on woollen manufactures, XXI. 915

(Keith), his physical atlas, XVII. 613, 614, 617, 642-on the distribution

of birds, 633.

(Mrs), her novels, XIX. 282. (SAMUEL), XII 793—his opinion of Rochefoucauld's maxims, L 54 - his characters of Akenside, IL 434, Sir Thomas Browne, V 687, Burman, 786, 787, 788, Denham, VII. 787; Cowley, 471; Dryden, VIII. 204; Jenyns, XII. 726; Bolingbroke, IV 816-on Hector Boyce, V. 252; Mallet, XIV 111, Fenton, IX. 509; Edmund Smith, XX 346; Thomson, XXI 234, 235, 236-Boswell's life of, V. 64-Dr Brocklesby's kindness to, 674—his dictionary, VIII 9—on the drama, 152—his friendship with Garrick, X. 406, Goldsmith, 706 et seq.; Mrs Piozzi, XVII 714; Sir J. Reynolds, XIX. 101—on the poetry of the Duke of Buckingham, XX. 99—on Lord Hailes' Annals of Scotland, VII 634 works of Congreve, 248-on Iona, XII. 441-his tour in the Hebrides, V 64his opinion of the newspapers of 1758, ns opinion of the newspapers of 1755; XVI. 184—on Ossian, XVII. 6; Ros-common, XIX. 423—his tales, 275—on Rowe's plays, 451—his translation of Lobos' history of Ethopia, XIII. 531— his alleged meeting with Adam Smith, XX 343, n. 2—his antipathy to Swift, 878 and n. 2—his fondness for tea, XXI 88

Johnson's catalogue of stars, IV. 95. JOHNSTON (Arthur), XII 803.

— (Cuthbert W), on goats, II 354. — (John), on animals, XIV 125—on birds, XVI. 725.

· (Prof.), his analysis of baileyflour, V. 321.

Johnstone (Charles), novels of, XIX, 275. (Robert), historian, XII 804. (Sir W. Pulteney), chair of agri-

culture in university of Edinburgh founded by, XX. 338, n. 2
—— in Renfrewshire, XII. 804. JOHORE, Malay town, XII. 804.

Joigny, town of France, XII. 804. Joiners, distinguished from carpenters, V 746—work of, in building, 750—qualifications of, XII. 800—measuring and JOI-JON

valuing joiners' work, V 753-health of, XIV. 442 JOINERY, XII. 804-not much practised

among the Romans, III. 445 See Roof. JOINT-STOCK COMPANIES, XII 817, 218; XVII. 316-defective state of the law regarding, 317—undertakings which may be successfully carried on by, 317.

Banks. See Banks

Jointed-fir order of plants, V 201 Joints, in carpentry, VI. 260, XII. 809— in stratified rocks, XV 163—universal joint, XIV. 399-of arches, XX. 728 et seq

of bones, II 830-of the spine, III 4 et seq, shoulder, elbow, wrist, and fingers, 34, hip, 36, knee and ankle, 37—diseases of, in cattle, XXI 558 surgical treatment of diseases of the, XX, 823-resection of, 825.

JOINVILLE, French town, XII. 819 (Jean) Sire de, XII 819 — his Memoiis quoted, VI 621; VII 534

(Prince de), his expedition to St Helena, X 215—marriage, 219—bom-bardment of Tangier, 221—his letter to the Duke de Nemours, 230

Joists, construction of, V 748—the strong-

est not those which contain the greatest quantity of timber, XX. 766-to form them of uniform strength, 769 Joktan, III 361

Joliba, XII 820; II 210. See Niger Jolofs, African people, XX. 50.

Joly (Abraham), on mortality at Geneva, XV. 622

Jolyffe, his discovery of the distinction between the lacteals and lymphatics, TL 761, 803

JOMELLI (Nicolo), XII 820

Jomini (Baion), on the military character of the French, 639, 642, Spaniards, 643; Russians, 649, n. 4; Prussians, 646, n. 4; British, 667—on war, XXI. 698, 700, et seg—on the English infantry at Talavera, 823.

JONAH, XIII. 1-alleged tomb of, XVI 273, 275,

Jonathan Ben Uzziel, his Taigum, XIX. 839; XXI 23

Jondisabour, in Chorassan, medical school at, XX. 814, 815

Jones (Col), on piers for haibours of refuge, XI 218

(David), on life assurance, XII. 404 (Edward Thomas), on book-keepmg, V 15, 27.

(INIGO), XIII. 2—his architectural works, III. 454—on Stonehenge, XX.

(Jenkin), his tables of annuities, &c, XII 402

(Jeremiah), on the Apociyphal books, VII. 298.

(John Gale), V 607. (JOHN PAUL), XIII. 2; V. 495 n.

(Sir John), on sieges, IX. 824, 825 -on Torres Vedras, 806

(Richard R.), Inguist, XIX. 419.
(Rymer), on the earthworm, XI
—on leeches, 804.

- (SIR WILLIAM), XIII 3-his reply to Anquetal du Perron, III. 259-on the Asiatic races, 747-on Buddhism, V. 725-on the Hindu origin of chess, VI. 537-on the Chinese, 557, 558-his character of Lord Ashburton, VIII. 260on language, XIII. 207, 208-on absorption, as one of the doctrines of the Vedanta school, I. 147, n -- on the law of evidence, VIII. 790

— (Thomas), his optigraph, VI. 119-his mural circle, IV. 152.

- (Wharton), on the blood of fishes, II 785.

- (William), divine, XIII. 8. Jones's hydrometer, XII, 86.

- Historical Sketch of the Electric telegraph, XXL 107.

JONKOPING, in Sweden, XIII. 5; XX. 864. Jonnè's (Col. Moreau de), his account of a species of serpent, XIX. 67, 68.

# JON-JUD

Jonson (Ben), XIII 5—on Bacon's forensic eloquence, L 239—his admiration of Bacon, 1b—his merits as a diamatist, VIII. 158—his visit to Drummond, 191 -epitaph on the Countess of Pembroke, IX 283-poetry of, XVIII. 122 -his notice of Spenser, XV. 506.

- actor, XXI 175. Jooria, seaport in Hindustan, XIII. 7 JOPPA, XIII 7. See Jaffa.

- genus of insects, IX. 188. Joravko (P), his work on insects, IX 22. JORDAENS (Jacob), painter, XIII. 7; XVII.

JORDAN, river, XIII. 8; XVII 184, 186. 591, 647

Jornandes, Gothic author, X 729. JORTIN (John, D.D.), XIII 8—on the style of Erasmus, IX. 323—on the work of Erasmus, De libero arbitrio. 321

JORULLO, volcano, XIII 8; II 674, XIV. 714, 724; XXI 605.

Joseph I., emperor of Germany, XIII 8 II. emperor of Germany, XIII 8; IV 304, 595—his plan for exchanging the Austrian Netherlands for Bavaria, V 516

- I of Portugal, XVIII 386 - the Blind, his Targum, XXI 23 - son of Jacob, XVII. 192—date of his becoming governor of Egypt, VIII.

tribe of, XII 767 Josephine, empress of France, her marriage with Napoleon, XV. 785-crowned, X. 134-divorce, 153

ed, A. 194—urvoled, 195 JOSEPHUS (Flavius), Jewish historian, XIII. 8—his reference to Christ, XII 760—his account of Jerusalem, 736 his account of the Essenes, IX. 334, 335; of the Pharisees, XVII. 505. JOSHUA, XIII 10; XII. 766.

Josiah, king of Judah, his engagement with Neko, VIII. 464

Josika (Baron), Hungarian author, XII.

Jotapata, in Galilee, XIII. 9 Jouannetia, fossil mollusks, XVII 108. Joubert (General), X. 104, 113 et seq

- on the manufacture of tobacco. XXI 296. JOUDPOOR, in Hindustan, XIII. 10

Jourfroy (Theodore-Simon), XIII. 10on the limits of psychology and physiology, XIV 556, n 2

(Marquis de), his steam-boat, XX.

Joule (Mr), on the mechanical effect of heat, I. 942; XI 276-on atomic volumes, VI 449—his "equivalent," XIV. 408; XX 618—on the use of electricity and magnetism in mechanics, 418
—on the relation of heat and work, 561-on the application of electro-magnetism, XXI. 643

Jourdan (General), X. 88 et seq.—his cam-paign of 1796, V. 563; XI 276. Journal, in book-keeping, V. 16, 18, 21collective entries in, 28.

of a ship, XVI. 25.

JOVELLANOS (G. Melchior de), XIII 11; IV. 156; XVII 28, 29

JOVIANUS (F. Claudius), Roman emperor, XIII. 12; VII. 309.

Jovrus (Paulus), historian, XIII. 12. Joy, death from excess of, VIII. 192, n 1. Joyce's country, in Galway, X. 388, 389. Juan (Don), of Austria, XI. 569, 570.

(Don Jorge), his secret report to the Spanish government, IV. 830.

FERNANDES, Island, XIII. 13. II, of Aragon, XX. 464 - (San), river in Nicaragua, XVI.

242, 243 JUBA I., king of Numidia, XIII. 13; XVI 350.

– II, XIII 13. Jubbulpore, in India, Sepoy insurrection at, XVI. 311. JUBILEE, XIII. 14-in Paris, X. 192.

Juckes' patent furnace, XX. 856. Judah, XII. 767—country of, XVII. 184. JUDAS MACCABEUS, XIII. 14, XII. 769, 733.

#### JUD-JUN

Judes trees, XVII 763. Jude, XIII 14—epistle of, 15 Judea, XIII 15; XII 768, XVII 188 coms of, XVI 379

JUDENBURG, in Styria, XIII 15. Judge-legislation, XIII 268, 269.

Judges, duties of, according to the economists, VIII 381—their character in former times, 774

Judgment, in metaphysics, XIV 591necessary, 597—right of private judgment in religious matters, I 540-an unavoidable necessity for the exercise of it, 541—responsibility of, ib
——, in law, VIII 791

, in logic, XIII 568-Kant on, 51 necessary to the character of a poet,

XVIII 94

-, last XXI 219. Judicature, XIII 275

Judicial proceedings in England, VIII 788; XIII. 274 - evidence, IX 418 - combat, VI 611—power in Eng-

land, VIII 772 Judiciary of the United States, XXI 429 Judson (Mr), American missionary, V

JUGDULUK, in Afghanistan, XIII 15. JUGGERNATH, XIII. 15; VII 602, XI.

Jugglers, Hindu, IV. 525.

Juglandaceæ, nat ord. of plants, V 208 Jugulares, fishes—their fins and pelvis,

JUGURTEA, king of Numidia, XIII 15; XVI. 350—his war with the Romans, XIX 318.

Juice of plants See Sap - of the sugar cane, XX 792 Jujubes, V 189 Jujuy, in La Plata, XVII 779

Julia, XIX 333

, lex, XIX 320

665.

era, VI 672 - period, VI 81, 665 - (Port San), XVII. 835.

JULIANUS (F Claudius), Emperor, XIII 16; VII 305 et seq —apparition seen by, III 311—his attempts to rebuild the temple at Jerusalem, II. 644, XII. 776, 734, 744 , XVII 195

-(Didius), XIX. 346. JULICE, Prussian city, XIII. 17
Julien (M) his translation of a Chinese work on the silk-worm, XX 287 JULINDER DOOAB, in India, XIII. 17

· III (Pope), XIII. 18. -, martyr, II. 4. July, VI 77-gardening calendar for, XI.

JUMBASIER, town in Hindustan, XIII.

JUMILLA, Spanish town, XIII 19 JUMINA, nver, XIII. 19; XI 448, 450; X 400; XVII. 647.

Jumper, for boring rocks, IV 755

JUNAGUR, town in Hindustan, XIII 19. Juncaces, nat. ord of plants, V 213. Juncagunaces, nat. ord. of plants, V 214. June, gardening calendar for, XI 759 Jung Bahadoor, XVI. 149, 314, 315

Jungermanniacem, sub-order of plants, JUNGFRAU, Swiss mountain, XIII. 19 XXI 504—height of, XVII. 642. Jungle cock, XVI. 789. JUNIEN (St), French town, XIII. 19

JUNIPER, XIII. 19; V. 209-oil of, XVI 496

Junius (Franciscus), XIII. 19. — (Hadrian), on the invention of printing, XVIII. 524

-, Letters of, XIIL 20, 754; X 285, 286; XI. 59—in the public advertiser, XVI. 185.

Junkerite, mineral, XV. 100

# JUN-JUS

JUNESEYLON, Island, XIII 20 Juno, Roman divinity, XIII 20 , planet, IV 68; III 808

Junot (Marshal), V 608, X 139, 148— anecdote of, XV 783, n—his myssion of Portugal, XVIII 387—Spain, XXI 820, 821

JUPITER, Roman deity, XIII 20-Phidias statue of, XVII 508

Ammon, II 718, 724-temple of, XVI 397-Alexander the Great's visit to, XIII 768.

stator, temple of, III 474, 475. —, planet, IV 69, 91—belts of, IV 69—mequalities of, III 812, I 815—variations in its orbit, IV 107—periods of revolution, I 816

(satellités of), III. 800, 813, IV 70, 73, 75—discovery of four by Galileo, I 607; III 800—theory of their mo-tions, I 785—Laplace's theory, 785, 815 - their disturbances by action on one another, IV. 108—Lagrange on, XIII. 152, 156—mode of finding the longitude by their eclipses, 688 Jupon, XI. 322

JURA, island, XIII. 20, XI 278-whirlpool of Coryveckan, near, VII 422

department of France, XIII 20

MOUNTAINS, XIII 21; XX. 887; XXI 531

Jurassic period, in geology, XV 206-Russia, XIX. 517—fishes of, XII 348, 349, 350, 352

JURIEU (Pierre) XIII 21—his quarrel with Bayle, IV 523

Jurin (Dr) his theory of capillary action, VI. 212

Jurine (Louis) his works on insects, IX 12-on the circulation of the blood in crustaceans, XV 356

Junsprudence, XIII 274, 267-Bacon on, I 36-Grotius on, 86-origin of the law of nature and the law of nations, opinions of different philosophers, 90, and n -good effects of the alliance between the law of nature and the law of nations, ib -a third and distinct idea of, sanctioned by Adam Smith, 91—abstract code of laws unphilosophical, 93-reasons why the Roman law should be taken as a standard, ib -Bentham's writings on, 394-and legislation, different senses in which the words are used, XIII 267—what belongs to it in common with moral philosophy, XV 587, I. 400—Norwegian, XVI. 330— medical, XIV. 422, 453. See Law, Medical Jurisprudence JURY TRIAL, XIII. 22—trial of civil

causes by, in Scotland, II 127-in England, VIII 787—in France, X. 282—application of the theory of probability to the decisions of juries, XVIII 609-Smellie on, XX 337 Jus mariti, XII 53—jus naturale, XIII.

265

IV. 572-on mesmerism, XX 419, 420, 421.

Justice -circumstances which distinguish it from other virtues, L. 87—the rules of, not enumerated by ancient moralists, ib -origin of the sense of, 383-Aristotle on, III 562-duty of observing, XV. 567—one of the ends of government, X 732—an attribute of God, XXI. 192. See Ethical Philosophy. Vurtue.

- CLERK of Scotland, XIII. 26 , College of, VII, 114; VIII 895. , Courts of, in England, VIII 785

-France, X. 281. - General (the Lord), XIX 810 - OF THE PEACE, XIII. 26; XVIII.

191 JUSTICIAR, OF Justice-General, XIII. 27, XIX. 810 Justiciary, Court of, in Scotland, XIX

810. Justification, in theology, XXI. 218.

# JUS—KAM

JUSTIN MARTYR, XIII 27; IX 491. Justina, II 663, 664

JUSTINIAN I (Flavius Anicius), XIII 28, VII 312, 313-aqueduct of, III 335his buildings in Jerusalem, XII 731-Egypt under, VIII 474—his code, VI 745, VII 52; XVIII. 565—his treatment of Belisarius, IV. 627

- II (Rhinotmétus), XIII 28, VII. 212

JUSTINUS, Latin historian, XIII 29 -I, emperor of the East, XIII 29; VII 312.

II emperor of the East, XIII 29. Jute, or jute hemp, V 185 JUTERBOCK, Prussian city, XIII 30

Jutia, or Hutia, quadruped peculiar to Cuba, VII. 565 Jutland, VII '746

JUVENALIS (Decimus Junius), saturist, XIII 30—poetry of, XVIII. 105—Gif-ford's translation, X 622—Dussaula's French translation, VIII 269. Juxon, Bishop, V 412.

# K

K, letter of the alphabet, XIII 31-m abbreviations, II. 19 Kaaba of Mecca, VI 44; XIV. 378, 379.

Kabbala See Cabbala Kabyles, African people, II 219, 566

Kacho, VI 49. Kady, oriental judge, III 351. Kadyak, island, II. 465; XIII. 129

KARMPFER (Engelbert), XIII 31—on Japan, XII. 688, 689 et seq—on the Japanese and Chinese gods, VII. 716, 717

KAFFA, Or Caffa, XIII 31; IV. 744; VII 505.

Kafir or Kaffre, XIII 82 See Caffres. KAFIRISTAN, XIII 37 Káfoor, king of Egypt, VIII 477 KAFRARIA, XIII 82

Kahlamba mountains, in Natal, XV. 802,

Kahoolawe, island, XVIII 270 Kaids on sheep, II. 349 Kaiechos, Egyptian king, VIII. 454 Kailas mountains, XI 441

Kaimacam, VI 60
Kain (M le), his proposal for testing the ments of dramatic pieces, XXI 172.
Kainozoic epoch, in geology, XV 195 Kaira, in Hindustan, XIII. 87. Kairwan, in Tunis, XIII 87. KAISARIVEH OF Kaisariah, in Asia Minor,

Kaiserburg, palace, XXI 583. KAISERSLAUTERN, XIII. 87. Kakodyle, VI 518. Kakoxene, mineral, XV. 101. Kakundy, African river, XVI 393. Kalabshee, temple of, XVI. 349. Kalamarka, Hungarian dance, XIII. 37. KALBE, Prusian town, XIII 37 Kale, culture of, XI '737—sea-kale, 742. KALEIDOSCOPE, XIII, 37; XVI 556. KALENDS, or Calends, XIII 40; VI. 76.

KALISZ, or Kalisch, Polish city, XIII 40 Kalı-yug, era of, VI 676. Kalımenjur, XIII 40. See Callinger. Kalmar, in Sweden, VI 104

Kalmucks, or Calmucs-skull of, III 29. Kalocsa, Hungarian town, XIII. 40. Kaltenbach (J H ), his work on insects, IX 22.

KALUGA, in Russia, XIII. 40; XIX. 521. Kaluschi, II. 680 Kama, nver, XIII. 40.
Kames (Lord) See Home (Henry)
Kamuchi, bird, XVI 807.

Kaminietz, town in Russian Poland, XIII 40—government of, XIX. 521
Kamis, in Japanese mythology, VI. 121.
KAMISHIN, Russian town, XIII 40.

Kammererite, mineral, XV 80. Kampylite, mineral, XV. 106 Kampylite, mineral, XV. 100

Kampylite, mineral, Min

# KAM—KAR

Kamtz, his isobarometric lines, XIV. 664 Kamtz, his isobarometric lines, XIV. 664
—on meteorology, 649 et seg
Kanawha, river, XIII 41
Kandamar, XIII 41 See Candahai
Kandake, VI 168
Kandian country, VI 396
Kandr, city in Ceylon, XIII 41, VI 391, 398

Kane (Dr ), his northern voyage in 1853,

XI 40, 41, XVIII 175—raised beach described by, XVII 585—on the source of the Mary Minturn river, 576, n-an extreme temperature recorded by, 613

-(Sir Robert), on the fall of rain in Ireland, XII 504—on gold in Ireland, 506—on the inland navigation of Leitrım, XIII 329

Kaneelstein, XV 85. Kangaroo, XIV 176; IV. 260; XXI 31— teeth of, XVI 483—homologies of the teeth of, 484-its organs of voice, III. 101-stomach, 108-fossil, XVII 174, 175, 638

- rats, XIV. 176-dentation of, XVI 449

ISLAND, XIII 41, IV 293 Kangra Valley, in the Punjab, XVIII, 687 KANGRAH, fort in the Punjab, XIII 41 Kano, town in Houssa, XIII 41; XI. 777, II 229; XIX 565

KANOGE, in Hindustan, XIII. 41 KANSAS, XIII 41; XXI 419—river, XIII. 42, XV 281.

 Nebraska Act of the United States, XXI 442

Kanstatt, mineral springs of, XXI 938. KANSUH, in China, XIII 43. KANT (Immanuel) XIII 43; XI. 282-

his critique of pure reason, and the idea he annexed to the title, I 189outline of the doctrines in that work, XIII 48—Madame de Stael's notice of it, I 190—apparent identity of his doctrine with that of Cudworth, 43, n 2, 191, n 1, 194, 195—on Hume's theory of causation, 193—his claims to originality ill founded, 194—on general ideas not derived from experience, 279—on time and space, 195, 280, 281—his argument for free will, 196—his principle called practical reason, 197, 429—Reinhold on his doctrines, and the impression produced by them, 198-Prevost on, 199decline of his system, ib -schools that have emanated from his, 200-its opponents, 201—evils resulting from his writings, 283—his definition of logic, XIII. 571 n —his ethical system framed for the purpose of guarding certain principles not sufficiently clear or well founded, I 428-the performance of duty regarded by him as the chief end of man, 1b —on our a priors principles of knowledge, XI. 282—his rejection of experience as a source of knowledge, 284—on universal history, 544—his house and tomb, XIII. 129—his categones or forms of thought, XIV 586, and n—his four forms of judgment, 592, n 2—on syllogisms, 593, n 2—ontical philosophy of, 606—on metaphysics, 616, n 2 et seq.—on moral obligations, XV. 563—his practical rule of virtue, 564—his classification of duties, 565—duty to God, 570—his definition of happiness, 572—goodness and happiness distinct, 574—on the character of rational psychology, XIV 604, n 3—on the antinomies of pure reason, 618—his notion of beauty, 623, n, 9 -his use of the word reason, XVIII. 815—Jacobi on, XII 668—on the moral proof of the existence of God, XXI 187; on the proof from design, 188

KANTEMIR, XIII. 52, XIX 547. KANTUEK, town in Cork, XIII. 52 Kaolm, porcelain clay, XV. 88, VI. 898; XIII 489; XVIII 439

Kapnite, mineral, XV. 100. Kara, sea of, XIX 516 Karachi, town in Oudh, XX. 805. Karaites, or Caraites, VI. 228; VII. 504,

KEM—KER

#### KAR-KEB

KARAMANIA, XIII 52 See Caramania.

Karasubazar, in the Crimea, VII 505.

KARAMSIN (N. Mikhaelovitch), historian,

Karak, island, XIII 52.

Karakoram mountains, XI 441.

Kara-kerman, IV 742

XIII 52; XIX 547

Karens, Indian race, XXI 151, 152. KARICAL, town in Hindustan, XIII. 52 Karım Khan, XVII. 440, 441 Karlsbad. See Carlsbad. Karlstadt. See Carlstadt Karmatees, their invasion of Egypt, VIII 477 Karmoot, fish, XII 260
Karm (el), lake, VIII. 429, 503
KARNAK, XIII. 52, VIII 507 See Carnac (Temple of) KARNATA, XIII 52. Karnow, Austrian town, XII 670 KARNTHEN, XIII 52 Karpholite, mineial, XV. 73 Karphosidente, mineral, XV 101. Karrakorum, III 753. Kars, town in Asiatic Turkey, XIII 52-General Williams' defence of, 58; XIX 511. Karslake's aids to the study of Logic, XIII 577 Karstenite, mineral, XV. 96 Karun, Persian river, XVII 420 Kasan, XIII 58; XIX. 521—university of, XIX. 532; XXI 492
KASCHAU, Hungarian city, XIII 54
Kashan, VI 212, n KASHGAR, or Cashgar, XIII 54 Kashna, XI 778 Kashrood, river, II 202 Kaskaskia, in Illinois, XII 362, 363 KASMARK, in Hungary, XIII 54 Kassimow, Russian city, XVII. 54 Kastamouni, town in Anatolia, XIII 54 Kastoi, mineral, XV 72. Kat, nver settlement, XIII. 34. Katagum, XI. 776, 777. Kater (Captain Henry), I 852—his pen-dulum, 776, 852—his collimator, 852, VII 127—his hygrometer, XII 186—on the method of making artificial magnets, XIV. 77-on the needle, 78his azimuth-compass, 79—his pendulum observations, IX. 573; XXI 800, 801. Katharine (St) docks, London, XIII Kathetometer, XX 560. KATRINE (Loch), XIII. 54; XVII 456, XIX. 794—its temperature at different depths, VI. 777-water for the supply of Glasgow from, X. 649 Katsena, province of Houssa, XI, 776. KATTYWAR, in Hindustan, XIII 54. Kauai, Island, XVIII. 270 Kaung-hee, Chinese dictionary of, VI 577, 578-anecdote of, VI. 595. Kaup (Dr), on fishes, XII 230, 233 et seq on the teeth of animals, XVI 472 483—on fossil cervidae, XVII. 170. Kaun, or Cowdee pine, XVII 629; V. Asun, or Cowace pine, XVII 629; V.
209; XVI 238—as timber, XXII 275.
KAVALA, Turkish town, XIII 55.
Kawara, African river, II 214. See Niger
Kay (John) physician, XIV 460. See Carus Kaye (Dr), on the miracles of the early Christians, VI. 698

(John), of Bury, his invention of the fly shuttle, VII. 441; XX 508 KAYNS, Asiatic tribe, XIII. 55 KAZEROON, Persian town, XIII. 55. Kazmczy (Francis), XII 19. Kea, lough, XIX. 420. KEAN (Edmund), tragedian, XIII. 55; XXI. 176. - (Charles), his management of Drury Lane Theatre, XXI. 174. Keane (Sir John), V 667—Ghizni stormed by, X 603. KEATS (John), XIII. 55-poetry of, XVIII 127; Jeffrey's opinion of, XII. 717. Keays (Christopher), on the produce of the Irish salmon fisheries, IX. 624, 625. Kebbi, m Houssa, XI. 777. Kebles' Christian Year, XII 189.

KEC-KEM Kempenfelt (Admiral), V. 501 Kecho, VI 49 KEDARNATH, in Hindustan, XIII 57. KEMPIS (Thomas à), XIII 61, XI 590 Kedge anchor, III 116. KEMPTEN, town of Bavaria, XIII 62 KEDGEREE, town in Bengal, XIII 57. KEDJE, in Beloochistan, XIII 57 KEN (Thomas), bishop, XIII. 62 KENDAL, XIII 62; XXI 843—group of Kedlestone Park, VII 754 rocks, XV 198 KENEH, in Upper Egypt, XIII. 62, VIII -, sulphurous spring at, VII 755 Kedous, river, XI. 353 Kedron, nver, XVII 188 See Kidron Keel, of ships, XX 185—of iron ships, KENILWORTH, XIII 62 KENMARE, Irish town, XIII 63.
——river, VII 372, XIII. 73. 194-launching on the, 205 KENMORE, in Perthshire, XIII 63 Keel-birds, XVI 779 KEELING, Islands, XIII 57 Keelson, XX. 194 Kennard (T W), his design for the Crumlin viaduct, XII 597 Keelwa, in Zanquebar, XVIII 735 Kennebec, river in Maine, XIV 98. Kennebec, river in Mane, X.17 98.

Kennedy (Col. Vans), on the origin of languages, II 616—on the Celtic language, VI 366—(Mr), his discoveries in Australia, Keene's marble cement, XX 715 Keep of a castle, VI 327 Keeyeff, Russian government, XIX 521 Keezi, Take, XIX 549 Kefil, village of Irak Arabi, XIII. 57. Kehl, town in Baden, XIII 57 —— (Walter), his "Flyting" with Dunbar, VIII 250 KEIGHLEY, town in Yorkshire, XIII 57-- (Bishop), XIX 759, 760-St Salits worsted manufactures, XXI. 918, vator's College, St Andrews, founded ъу, ХХІ 473. Keightley (Thos ), on the date of Spenser's Kennel management, XI 768, XII 37. birth, XX 505, n KENNET, river, XIII 63. Keilhauite, mineral, XV 91 (White), bishop, XIII 63—his account of Hobbes, XI 551
Kenneth Macalpine, XIX 744 Keill (John), on Newton's claim to be regarded as the inventor of the calculus, IX 672-his challenge to John Ber- Scottish kings so named, XIX 749 noulli, IX 675 KENNIGOTI (Benjamm), XIII 68—on the Pentateuch, IV. 696—his edition of the Hebrew Bible, 697, XIX. 835. Kennington Park, XIII 668 Kensington, XIII 660—palace, 668, South Keinton, battle of, V 403 Ken (Sir William), his expedition against Rao Bharmuljee, VII 599 Keir's hydrostatic lamp, XIII 171 Keirh, town in Banffshire, XIII 58 Kensington museums, XXI 324
Kent, XIII 64—garden seeds grown in — (Bishop), his history of affairs in Scotland, XXI 897
— (J. F. E.), field-marshal, XVIII. 651—game invented by, VI 538 II 337—1ts hops, 333; V 324—1ts orchards, II 887—population and value of property, VIII 754—disturbances there in 1830, V 659—inheritance of land in, XVIII 516—wool of, XXI 911, - (Dr), his photographic process, XVII 549 Keith's siphon barometer, IV. 461. Kelaart's Flora Calpensis, X 619 912—paper making in, XVII 259 Kelænonesians, in ethnology, IX 347 KELAT, city of Asia, XIII 58, IV. 640, valley in Persia, XIII. 58 Kelch, his work on insects, IX 23 Kelland (Prof), on waves, I 889; XII 76—his theory of heat, I. 952. KELLERMANN (François-Christophe), Duke of Valmy, XIII 58; V. 574; X. 70, 119, Kellet (Capt ), X 474; XVIII. 172. Kellgren, Swedish poet, XIX. 698. Kellia, genus of mollusks, XV. 350-fossil, XVII 107. Kellie (Dr ), on the amount of fluids in the cranium, XVII 698 Kells, Irish town, XIII 59; XIV. 877 Kelly (Sir Fitzroy), on bubery, V 942— on the reduction of the statute law, XIII 273, n.
(William), his machinery for mule spinning, VIÍ 445. —— (John), on the carboniferous rocks of Ireland, XV. 200 Kellystown, VI. 240 Kelp, XIII 59—manufacture of, X. 661,

662; in Orkney, XVI 721—Shetland XX. 114—Hebrides, XI 279—10dine obtained from, VI. 469—its use in glass-

making, X 661.
Kelpies, I 464
KEISO, XIII 59—burnt by the English in

Kelts, spawned salmon, IX. 590, 616, XII 289.

KEMAON, in Hindustan, XIII. 59—height of mountains, XVII. 648—geology of,

KEMBLE (John Philip), tragedian, XIII 60, 55, XXI 174, 176—his burial place, XIII 250

Kemp (Edward), on architectural garden-

Kempelen (M. de), his automaton choss-player, III. 188.

-(T M), his contributions to philo-

-IX 851 See Celts

Kelvin aqueduct, III 338

1542, XI. 781.

logy, XVII. 528.

mg, XVII 774

(WILLIAM), landscape-gardener, XIII. 68 - in Rhode island, XIX 147 Kontigern, III 721, X. 645. Kentish rag, fossils of, XVII 93—as a building stone, XX. 712. Kent's Grammar of Heraldry, XI 339, n. Kentucky, XIII. 69, XXI 419—debt of, 428-wines, 888. - Coffee tree, XVII 763 Kenworthy and Bullough's power looms, XXI 789 KENYON (Lloyd, Lord), XIII 70. KEPLER (John), XIII 71, I 604—on the formation of a new star, 842—his tract on stereometry, 554—introduced the idea of infinitely great and infinitely small quantities in geometry, ib —on circles, ib.—on mertia and motion, 606—was the first to analyse the structure of the eye, 625—his telescope, II 87; XVI 529—his astronomical discovenes, I. 579, 488 et seq, III 799—his problem to determine the sun's place in its orbit, IV 19-transit of Mercury predicted by, I. 611—his three laws, 579, IV. 60; III 799— on attraction, I. 674, IV 220—on the cometary orbits, VII. 167-on the mensuration of round solids, IX 670-on geometry, X. 505-on light, XIII 449 -his Dioptrics, I 627-his obligations to Tycho Braahi, V. 266-on logarithms, XIII 558—on ice crystals, VII 108—on optics, XVI 529—telescopes improved by, XXI 118-on the tides, 250. Keppel (Admiral), V. 465, 484, VIII. 251 —his engagement with the French fleet, V 485—his dispute with Sir Hugh Palliser, 486-his trial and acquittal, 487his resignation, ib Kerasan. See Keresoon Kerate, mineral, XV, 107. KERBELA, city in Asiatic Turkey, XIII. 71, XIV 546 Kerckringius, anatomist, II 763 Keresoon, Turkish port, VIII 71. Kerguelen Land, XIII. 71; IV. 268 plants of, XVII. 629.

KER-KHO Kens, genus of fishes, XII 304 Kerka, river, VII 627 KERKOOK, Turkish town, XIII 71. KERMAN OF KIRMAN, XIII 71 KERMANSHAW, in Persia, XIII 71 KERMES, insect, XIII 71, IX 172-its use in dyeing, VIII. 284-in Greece, XI 16 -mineral, XV 122 Kernell (T. E) his work on insects, IX. 71 Kernels, or lymphatic glands, II 805-of seeds, V 140 Kerolite, mineral, XV 84 Kerona, genus of animalcules, III 203 KEROWLEE, town in Hindustan, XIII 71.
KERRY, Irish county, XIII 72, XII 515, 517—effects of the cottage system in, VII 481. VII 431. Kersanton rock, XV 135 Keisseboom (William), on the rate of mor-tality in Holland, XV. 601, 631, XII 202 KERTCH, in the Crimea, XIII 75; IV 744; VII 504, 505 Kestril bird, XVI 745. Keswick, XIII 75—lake, VII 578 KESZTHELY, Hungarian town, XIII. 75. Ketengus, genus of fishes, XII 262 KETSKEMET, Hungarian, town, XIII 75 Kettle-drums, VIII 190, XV 713 KETTERING, in Northamptonshire, XIII Ketton building stone, XX 712 Ketupa, genus of biids, XVI 746 Keuper, group of rocks, XV 205, X 584 fossil fishes of, XII 348 Keverburg (Baron de) on Belgium, IV 599, 600, 601 Kew, in Surrey, XIII 75-gardens at, II 430-Aiton's Hortus Kewensis, II 431, VIII 201. Kewley (Mr), his syphon for hot-houses, Kew-lung-kang, river, VII. 48. Kexel (Olaf), Swedish dramatist, XIX 699 Key See Lock Key, an apparatus in electric telegraphs, XXI 99. KEY ISLAND, XIII, 75-in music, XV 706 —seed of trees, XVII 768
KEY ISLANDS, XIII 76, 79
Keys, house of, in the Isle of Man, XIV 245. Key stone, III 401 et seq See Bridge KEY-WEST, Island, XIII 76 KEYNSHAM, in Somersetshire, XIII 76 Khadedha, province of Houssa, XI 776 Khadedha, province of Houssa, XI 776 Kharpur, town in Oudh, XX. 305 Khaled, III 362. Khalif See Caliph KHALKAS, Mongolian race, XIII. 76; XV. 435 Khamsın wind, II 216. Khan, title, VI. 408. KHANDLSH, in Hindustan, XIII 76-hail in XIV, 659 KHANIA, in Candia, XIII. 76; VI 172 Kharesmees, VIII 482 Khansmians, their invasion of Palestine, XVII. 197. KHARKOV, in European Russia, XIII 76; XIX. 521-university of, 491, 532, XXI. 492. KHARTOOM OF Khartum, XIII 76; XVI. 268, 269, II. 224, 225; XX 51. Khasyah mountains, XVII 598 KHATMANDU, XIII 76. See Catmandoo. Khazar, traditionary Jewish kingdom, Khem, Egyptian deity, VIII 436 KHERSON, XIII. 76, XIX 521—coasts and ports of, IV. 742 Khio See Scio. Khirgises, steppe of the, III 782. See Kirghiz KHIVA, XIII. 77; V 759. KHOI, Persian town, XIII. 77. KHOJEND, XIII. 77. KHOKAN, XIII 77 KHOOLOOM, XIII. 77. KHORASAN, in Persia, XIII. 78-pastoral

tribes of, XVII. 430 Khorsabad, ruins at, XVI. 274, 275.

#### KHO—KIL

Khosru, or Khosrew I, king of Persia, XIII 78 Khumaraweyh, king of Egypt, VIII 476. Khuns, Egyptian deity, VIII 436 KHURD-CABUL, in Afghanistan, XIII. 78 Khursheed, Pascha, VIII 491 Khusrau Parviz, king of Persia, XVII 486. - Nushirvan, king of Persia, XVII 435.

Khusruf (Mohammed) Pasha, VIII 489 KHUZISTAN, IN Persia, XIII 78 KHYRPOOR, town in Hindustan, XIII 79. KI, or Key islands, XIII 79

KIAOHTI Or Kiakhta, town of Siberia, XIII.

79—trade of, VI 591; XIX 551

Kiangning Fu See Nanking

KIANGSEE, in China, XIII 79 Kiang-su, in China, XIII 79 Kid, flesh of, IX 762—kid-skin leather,

XIII 105 Kidd (John, M D ) his Bridgewater trea-

tise, V 364
(Mr), on the principles of reasoning, XIII 577

KIDDERMINSTER, XIII 79.
——carpets, VI 271, XXI 918
KIDDERFORE, XIII 79

Kidney-bean, culture of, XI 738 Kidneys of man, III 67—of brutes, 113—excretion from, XVII 666—worms in, XXI 974

Kidron, XII 737 et seq. Kidwelly, in Wales, XIII 79, VI 53 KIEFF, Kievor Klow, in European Russia,

XIII 79, XIX 469 et seq Kret, Danish sea-port, XIII 80—canal of, VII 748

Kielsenn (F C), his work on insects, IX 17 Kiener (L C) his work on the mollusca.

Kieser (Dr) of Jena, his system of tellur-

18m. XX 445 Kiesewetter, instance of fanaticism re-

lated by, IX 481 Kiffin (William), XVII. 392.

KIL XIII 80. Kilbagie distillery, VI 750 Kilbarchan, in Renfrewshire, XIII 80. KILBIRNIE, in Ayrshire, XIII 80 Kilbrickenite, mineral, XV 119 Kilchurn Castle, ruins of, IV 330

KILCREGGAN, XIII 80 Kilda (St), Island, XIII 80 Kildare, Irish county, XIII 80; agri-cultural statistics of, XII. 515, 517

- Earl of, XII 474 Kıldın, ısland, XIII 242. Kıldrummy, castle of, IL 33 Kilhamites, methodists, XIV 694 Kilia, mouth of the Danube, VII 654;

VI 742 KILIMANDJARO, African mountain, XIII. 84; II 211; X 477; XVII 600, 644. Kilimane, XV. 660.

KILKENNY, Irish county, XIII. 84-VII. 118—agricultural statistics of, XII.
515, 517—statute of, 471

CITY, XIII. 87—taken by Cromwell, XII 484.

KILLALA, Irish town, XIII 87, XIV. 870, 871

KILLALOE, in Clare, XIII. 87, VI 754. KILLARNEY, in Ireland, XIII 88, 72, 75— lakes of, XII. 505, XIII. 73, 88; salmon in, IX 620

Killas, or clay-slate, XV 245 Killicrankie, IV. 751—battle of, V. 441
Killinite, mineral, XV. 72.
KILMALLOCK, Insh town, XIII. 88, 489—battle of, XII. 477

KILMARNOOK, in Ayrshire, XIII. 88— woollen manufacturers of, IV. 338 railways to, ib

Kiln, XVIII 80-maltster's, V 828-brickmaker's, V 345—glass-maker's, X. 064 Kilogramme, Kilolitre, and Kilometre, XIII 88; X. 284.

Kilpatrick hills, XIX 791. KILRENNY, in Fifeshire, XIII. 88 KILRUSH, Irish town, XIII 88; VI. 754,

Kilsby tunnel, XVIII. 760; XX. 683

# KIL—KIN

KILSYTH, XIII 88-battle of, V 407coal and copper at, XX 702 Kilwarden (Lord), V 624

KILWINNING, town in Ayrshire, XIII 88 -mason lodge, XIV 337

KIMBOLTON, in Huntingdonshire, XIII 88 KIMOHI (David), rabbi, XIII. 88 Kimmeridge elay, XV 208

KINDURN, Russian fortress, XIII 89, IV 743; XIX 510 Kincaid (Sir John), on the effects of separate confinement in prisons, XVIII

KINCARDINE, in Perthshire, XIII 89 Kincardineshire, XIII 89—agricultural statistics, XIX. 796, 797, 798—population, 799

Kinchinjunga, one of the Himalayas, XI 438, 441; XVII 598, 643—its geological composition, 441.

Kindred, VII. 296

Kinè, in Egypt, VIII 506

King, doctrine of the divine right of, V -coming, a prerogative of, VII 73 -his precedence in the British legisla-ture, VIII 766—list of kings who have abdicated, II 24. See Monarchy

George's war in the United States,

XXI 434

(WILLIAM, D.D.), XIII 90-his work on the origin of evil, I 170 (Dr), principal of St Mary's Hall, Oxford, XXI 784

-(Capin ), governor of Australia, IV 271—on the specific gravity of sea-water, XVII 573.

(Gregory), on human mortality, XV 601.

(Sir J Dashwood), his improved

breed of harriers, XI 771.

(Dr), on fossil foot-prints of reptiles, XVII 132

King-bird, XVI 749

Kingdoms in Europe, IX 397. King-fishers, XVI 772 See Alcedo Kinghorn, in Fifeshire, XIII 93-ferry, IX 769 Kingly office of Christ, XXI 215

Kingo (Thomas), Danish poet, XIX 692 King-post, in carpentry, XIX 883. Kings-of-arms, XI 310 King's Advocate, or Lord Advocate, II

158. King's Bence (Court of), XIII. 90, VIII.

785, 788. KINGS, BOOKS OF THE, XIII. 90

Kingsborough (Lord), his work on the antiquities of Mexico, III. 502, n KINGSBRIDGE, m Devon, XIII 93.
King's College, London, XXI 470
Aberdeen, XXI 478

King's County, XIII 90—agricultural statistics of, XII 515, 517 King's Cross railway station, XVIII. 773;

Kıng's Evil. See Scrofula Kingsley (Rev. C), on the cure of stam-mering, XX. 534

Kingsmill, group of islands, XVIII 270 King's Sedgmoor, measurement of a trigonometrical base on, XXI 331 KINGSTON, in Jamaica, XIII. 93; XII

- in Canada, XIII 93; VI 144 - upon-Hull, XI 794

UPON-THAMES, XIII 93 - (John), on the strength of copper bolts, XX 174

Kingstown, in county of Dublin, XIII 94, VIII 214. Kımıc acid, VI 515

Kinkajou, in zoology, XIV 155. KINNAIRD'S HEAD, XIII 94. Kinnersley on electricity, VIII. 529—his electrical air thermometer, 626.

Kinniburgh (Robert), VIL 686. Kinnoull Hill, XVII 450, 457. Kmo, V. 190

KINROSS, XIII 94 Kinross-shire, XIII 94—agricultural statistics, XIX 796, 797, 798—popu-lation, 799—Ordnance survey, XXI

#### KIN-KIT

KINSALE, Insh town, XIII 95-harbour, VII 371-taken by William III 490. KINTORE, in Aberdeenshire, XIII 95, II

KINTYRE or Cantyre, XIII 95, VI 202 Kioge, town in Denmark, XIII 95 Kiolen, or Kjolen mountains, XIII 95, XVI 320

KIONG-TCHOU, XIII. 96. Kippers, IX. 616 Kippis(Andrew, D. D), XIII 96—his edi-

tion of Lardner's works, 245 Kirauea, volcano, XVIII 270, 271

Kirb-roof, XIX 381, 383
Kirby (Wilham), XIII. 96—his works on insects, IX. 11—his Bridgewater treatise, V. 364—his co-operation with Mr Spence, XX. 504—on the entozoa, XXI 977-on the echmi, 988, 990, 993

and Spence, their introduction to entomology, IX 11, XIII 96—on the number seven, III 191—on the olders of the arachnides, 370—their defence of entomology from the charge of cruelty, 177-on the insensibility of insects to pain, 1b -on the webs of spiders, 375 pain, 10—on the webs of spacer, or on Lamarck's views regarding the development of aurnals, 189, n—on the aranea aquatica, 880—on the maxille of maecis, IX 39—on the metamorphosis of insects, 54-insect seasons, 73

Kirchbaumer, his work on insects, IX 23.

KIRCHEIM, IN Wurtemberg, XIII 97 KIRCHER (Athanasius), XIII 97—on Ar-chimedes's burning glasses, VI 4, 5 on animal magnetism, XX. 415-on the speaking trumpet, XXI. 360. Kirguiz, Steppe of the, XIII 98, III 732

Kukaldy (David), his experiments on the strength of iron and steel, XX 779 KIRKBY, XIII. 101.

-Kendal, XIII 62 LONSDALE, XIII. 101. Stephen, XXI 843

Thore, XXI 843.
KIRKCALDY, XIII. 97

of Grange, XIX. 781, 787 Kirkoudbrightshire, XIII 98—town 100, 101—agricultural statistics, XIX 796, 797, 798—population, 799—Ord-nance survey of, XXI. 332, 333. Kirke (Colonel), V. 435. Kirk-of-Field, XIX. 785—Edinburgh Col-

lege built on, XXI 481. Kirkdale cave, fossil bones in, XVII 639 Kirkham, XIII 101

KIRKINTILLOCH, XIII. 101; VIII. 285 KIRK-KLISIE, in European Turkey, XIII

101. KIRKOSWALD, in Ayrshire, XIII 101

Kirkpatrick (Col.), on Nepaul, XVI. 142, 143 et seq.

Kirk-session, XVIII. 493 Kirkwall, in Orkney, XIII 102. Kirkiemum, in Forfarshire, XIII. 102 Kirsch-wasser, XXI 672

Kirwan (Richard), XIII 102-his chemical views and experiments, VI 352, 353-his method of calculating the point of perpetual congelation, 772

Kirwanite, mineral, XV. 73. KISCHINEFF Or Kischenaw, in Russia. XIIL 102

Kiskaludy, two Hungarian poets, XIII 102, XII 19, 20.

KISHENAGUR, in Hindustan, XIII 132 KISHM, island, XIII 102 Kishon, river, XVII 188 Kishom (loch), XIX. 795

KISHTEWAR, in Hindustan, XIII. 102. KISSINGEN, in Bavana, XIII 103. KISTINGEN, XIII 216

KISTNAH, river, XIII. 108; XI. 450; XVII 647. KIT-CAT-CLUB, XIII 103; XXI. 519 Kitchen-garden, XI. 697, 787-calendar,

758 Kites, birds, XVI. 748, 744.
——electrical, VIII. 527, 608. Krrro (John), XIII. 103.

#### KIT—KNI

Kitts' (St) See Christophers' (St). Kitunaha language, XIII 220. KITZINGEN, in Bayaria, XIII. 104 KIU-SIU, XIII 104, XII 688 KIZILERMAK, river, XIII. 104, XI 197. KIZLIER, Russian town, XIII 104 Kladova, X 641, VII 653 KLAGENFURT, Austrian town, XIII 104 KLAPROTE (Julius Heinrich von), orien-

talist, XIII 104; XVII 533, 505 -(Martin Heinrich), XIII 106 the chemical properties of the water of the Dead Sea, III 761.

KLARENZA, in the Moiea, XIII 106 KLAUSENBURG, Austrian town, XIII 106

KLAUSTHAL, in Hanover, XIII. 106, XI 211

Klèber (General), V 568, 574; X 119—his conduct m Egypt, VIII. 489—assas-

sinated, ib , X 119 Kleinarts (Nicholas), VI 762

Kleist (Edward C), his tales, XIX. 293 Kleptomania, XIV 582 Klincock (Di), on the electrophorus, VIII

Klingert's diving apparatus, VIII 57, 58 Klinoclase, mineral, XV 103 KLOPSTOCK (Friedrich Gottlieb), XIII 107;

XIX 717, 718—poetry of, XVIII 119 Klotzch on the potato disease, V 172 Klug (Francis, M D ), his works on in-

sects, IX. 13 Kinge (Prof), his work on animal mag-netism, XX. 425, 443 Knapp, on the heating powers of fuel,

XII. 543 KNARESBOROUGH, town in Yorkshire, XIII. 107, XXI. 959 Knebellite, mineral, XV 89

Knee, diseases of, in domestic animals,

XXI 559 Knee-pan, III 35. Knees, in ship-building, XX 186 KNELLER (Sir Godfrey), XIII 107—his

portraits, III 714
Kneph, Egyptian deity, VIII 485—temple

Knife, VII 600, 601 See Cutlery Knife-grinders, diseases of, XIV 442 KNIGHT (Richard Payne), XIII 107—on the Greek alphabet, II 612—his theory of beauty, IV. 540, 550—on the beauty of certain pictures, 552

(Charles), his chronological table

of Shakespeare's plays, XX 90

(James), expedition of discovery under, XVIII 169.

(T A), on the swarming of bees, IV 581—his idea that plants can be permanently continued only from seed, V. 168. XI. 702—on the contraction of wood, XII. 816-on the propagation of plants, XI 694, 695-his portable furnace, X 357—his theory of acclimation, XI 702—on horticulture, 703, 708, 711, 719-on the physiology of trees, XXI. 267-on the sap of trees, 268.

(Dr Gowin), his method of making CDr Gowin), his method of making artificial magnets, XIV. 68—his paste magnets, 78—his magnet, XXI. 646—(Mrs), actress, XXI 174.

Banneret, VI. 621—knight bache-

lor, 620

Knight-errantry, origin of, VII 536 KNIGHTHOOD, XIII 108-how conferred, VI 615-arms and privileges of, 616different orders of, 619—degradation from, 623, VII 699—rise of the various orders of, XVII 196—Portuguese orders of XVIII 305-Russian, XIX. 524 See Chivalry, Knights.

KNIGHTON, town in Radnorshire, XIII.

KNIGHTS AND KNIGHTHOOD, XIII 108
——— of the Bath, IV 498, XI. 340
—of the Garter, X. 407; XI. 340—of Malta, XIV. 114—Teutome knights, XVIII. 648—of the Thistle, XXI. 228. See Knighthood

Knittel, his publication of Ulphilas' translation of the Epistle to the Romans, XVII. 209.

# KNO-KOL

Knock (J W), his work on insects, IX 10 Knockmahon, Copper-mine of, XXI 769 Knockmealdown mountains, XXI 285

KNOLLES (Richard), XIII. 123. Knorring (Baroness), Swedish novelist,

XIX. 702

Knot, on a log-line, XIII. 551; XVI. 11-bend knot, XIX 90. Knot bind, XVI 804.

Knotwort, order of plants, V 193 Knout, or knoot, use of abolished in Russia, XIX. 525

Knowledge, division of the objects of, by Bacon, D'Alembert, and Locke, I 1, 8, 8—causes which combined to accelerate its progress after the revival of letters, 16, 19-its diffusion has improved the science of government, 24-its progress favoured by the Crusades, VII. 533what is implied in, I 477—two kinds of, yielded by consciousness, XIX. 111—Plato's views on, XVII. 804—of God, sources of, XXI. 185

Knowles (Admiral), his quarrel with Smollet, XX. 362 —— (Sir Robert), VI. 618; XIII 113.

(Mr), on fastenings in ship-building, XVI 97—on ships in ordinary, 99—on preserving timber, 99—on the larch plantations of the Duke of Atholl, XXI 275, 276

KNOX (John), XIII 133; XIX 778 et seq —Dr M'Crie's life of, XIII 758—his liturgy, XII. 516—birthplace, XI 176, established the doctrine of pre

destination in Scotland, XVIII 479.

(Dr) on the herring, XII. 235—on a species of whale, XIV 236—on the ova of echinoderms, XXI. 994.

KNUTSFORD, town in Cheshire, XIII. 129 Koala, marsupial animal, XIV. 177—dentition of, XVI. 449.

Kobaltbeschlag, mineral, XV 104. Kobell (von), his scale of fusibility in minerals, XV 63 Kobellite, mineral, XV. 120. Koch (C L), his work on insects, IX 24

(Gabriel), his work on insects, IX

Kochanowski (John and Peter), Polish poets, XVIII. 159.

Kochlin (J.), his work on insects, IX. 15 Kock (Paul de), his novels, XIX. 289 Kodiak, island, XIII 129. See Kadyak. Keechlin's turbine wheel, XII. 171. Koelin mountains, XIII 984 See Kiolin Kœlreuteria paniculata, XVII. 762. Kœning on bees' cells, IV 578. Koepstein (Wolfgang Fabricius).

Capito Koerner (Theodore), his poetry, XVIII. 119. Koh See Hindu Coosh Kohat, in the Punjab, KVIII. 687. Koh-i-noor, diamond, VIII 3, 4. Kohl-Rabi, culture of, II 821; XI 737. Kohl's description of a Russian bath, IV.

Kokum, or Cokum oil, XVI. 496 Kola, in Russian Lapland, XIII 242, destroyed by an English squadron, XIX 507.

Kolenatı (F. A ), his work on insects, IX.

Kollin, battle of, XVIII. 653. Kolınkski sable, X. 348.

Kolk (Vander), on morbid growths, XVII.

Kollar (Vincent), his works on insects, IX 17.

(G. G.), his work on insects, IX 18. Kolle (Mr), on the African languages, XIII. 227.

Kolliker (Dr A), his work on microsco-pical anatomy, II 770—on the cylinder axis, 810—on the nerves, 812—on muscular filament, 821-on the cuttlefish, XV 402.

Kollymte, mineral, XV. 84. Kolobeng, in Africa, II. 211.

#### KOL-KRA

KOLOMNA, Russian town, XIII. 129 Koloughs, people in Algeria, II 566 Kolpoda, genus of animalcules, III 201 Kolreuter on the pollen of flowers, V. 154 Koluri. See Salamis

Kolush language, XIII 220 Komorn, Hungarian city, XIII 129 Kongsberg, town in Norway, XIII 129 -silver mines of, XV 236, XVI 322,

Koniah, city in Asia Minor, XIII 129; XII 356

Koniggratz, town in Bohemia, XIII

characteristics of the control of th

Konigsmarck (Count), siege of Athens by,

Konig's printing-machine, XVIII 558 Konigstein, in Saxony, XIII 130, XIX.

Koninckia, fossil mollusks, XVII 104 Konlite, mineral, XV 125. Kookies, XI 467 . Koom, Persian town, XIII 130 Koondooz, in Turkistan, XIII 130 Koordistan, XIII 135 Koorsk, in Russia, XIX 521. Koosum, oil, XVI 495 Kootais, in Russia, XIX. 521. Koraes (Diamantes), XIII 130 Korah, sons of, XVIII 679

in Hindustan, VII 363. Koran, XV 302—Maracci's edition of XIV. 314; XV 303—Sales', II 456, XV 303—character of, I 491 See Alcoran Kordofan, in Africa, XIII. 131; II 225 Koreish, Arab tribe, III 348, 351—Koran

written in the dialect of, II 454. Konaks, XIII. 41-language, 217. Korner (Theodor), XIII 131. Koron, in Messenia, VII 410 Korotscha, Russian town, XIII 131. Korusko, desert of, XVI. 268. Kosorusco (Thaddeus), XIII 181; V. 543,

XVIII 151, XIX. 487 Kosfeld, Prussian town, XIII 132 Koslin, Prussian town, XIII 132. Kosloff. See Kozloos Kossacks See Cossacs.

Kossuth (Louis), provisional governor of Hungary, IV 308; XII 25—as a journalist, 20, 23—his proposal to dethrone the Hapsburg dynasty, 24-finds refuge in Turkey, XXI. 374. Kostendje, XIII 187

Koster (Laurenz), XIII 132, IV 706, 707; XVIII 524 Kostroma, in European Russia, XIII.

132 : XIX 521. Koszege, Hungarian town, XIII 183

Kora, in Hindustan, XIII. 183—sepoy insurrection at, XVI 311 KOTHEN, German town, XIII 133. Kothrol, island, XVII. 568. Kotles, Indian tribe, XI 467.

Kotigite, mineral, XV 104 Kotline, island, VII 517; XIX 552. Kottbus, Prussian town, XIII. 133. KOTZEBUE (A. F. Ferdinand Von), XIII 133, VIII. 167, 168—the Emperor Paul's

challenge translated by, XIX 489. (Lacut.) his voyage of discovery, XVIII. 170—his visit to Guahan, 269.

Kouban, IV. 745. Kouenlun mountains, XI 436 n. 2 et seq; XVII. 598.

KOULI-KHAN, XIII. 184 See Nadir Shah. Koupholite, mineral, XV. 73

KOURLAND, OF COURLAND, Russian pro-vince, XIII. 134; XIX. 521. KOURSK, in European Russia, XIII. 134 Kouyunjik, ruins at, XVI 278, 274, 275. Kovno, Russian province, XIX. 521. Kowala, genus of fishes, XII 287. Kow-bird, XVI 778

Kozloos, or Kozlov, XIII. 135; IV. 743; VII. 505. See Eupatoma. Kozzacks. See Cossacks. Krablite, mineral, XV 70.

#### KRA—KYA

reflection of cold, VII 100—on the Baltic, IV 403—on magnetism, XIV 7 on mortality at Petersburg, XV 605 Krafto, island See Saghalien KRAIN, or Carniola, XIII 135, IV 311 Kramericaceæ, nat ord. of plants, V 183 Krantz (Albert), XIII 135 Krapacks See Carpathian mountains Krasnoe, XIII 135, X 159 Krasnoe-Selo, XIII 135 Krasnoe-Yarsk, in Siberia, XIII 135. Kratzenstein on evaporation, IX. 407-on

fogs, XIV 654 Krause, his handbook of anatomy, II 769 on the dimensions of the organs of the human body, III 3 Kray (General), X 117 Kreatine, IX 757

Kreil (Dr), on the moon's influence on the magnetic needle, XIV 19 Kreittonite, mineral, XV. 87 KREMENTSCHUK, Russian town, XIII 135

Kremlin, XV 654. KREMNITZ, town in Hungary, XIII 135

KREMS, IN LOWER AUSTRIA, XIII 135. Krenitzin (Captn.), voyage of, II 484 KREUTH, in Bavaria, XIII 135 KREUZNACH, Prussian town, XIII 135 springs rich in bromides, VI 469 Kris, eastern dagger, XII. 706; XX 805 Krishnah, XIII 103

Krohnius, genus of fishes, XII. 304 Krokoit, mineral, XV 106 Krokydolite, mineral, XV 82 Kronstadt, XIII 135; VII 517 KROTOSZYN, Prussian town, XIII 135.

Krout (sour), IX. 760 KRUMHORN, musical instrument, XIII.

Krunitz on cookery, VIII 26 Kruse, novels of, XIX 293. Krusenstem's voyage, II 465; XIX 491 Kuang-si, in China, XVIII. 724 Kuang-tung, in China, XVIII 724. 

Kublai-khan, VI 561. Kugellan (J. G.), his work on insects, IX 8

Kuhl on parrots, XVI 733 Kuhn's edition of Greek medical writers, XX. 813, n. 2. Kuka, African town, X. 478

Kulm, village in Bohemia, XIII 135-Vendamme defeated at, X 163 Kumaön, XIII 59. See Kemaon. Kumbur, IV. 639

Kunersdorf, battle of, XVIII 654 Kunste (G), his work on insects, IX 12 Kupferindig, mineral, XV. 118. Kupffer on magnetism, XIV. 12, 18, 23, 87, 38, 55—his isogeothermal lines, 664,

672-on the climate of Russia, XIX

Kur, river, XIII. 135; XXI 92. KUR, river, XIII. 185; XXI 92.
KURDISTAN, XIII. 185.
KURDS, XIII. 185; III. 779; XXI 978their language, XIII 208
KUR-HESSEN, Or Hesse-Cassel, XI 302
KUR-ILS ISLANDS, XIII. 186, XIX 552.
KURNUL, IN HINDUSTAN, XIII. 186.

KURRACHEE, in Hindustan, XIII. 186pearl fishery of, XVII. 857 Kurrunj oil, XVI 496

Kurtus, genus of fishes, XII 298 Kussier, Turkish musical instrument, XIII 187.

Kustendji, in European Turkey, XIII 137. Kuster (Ludolf), XIII 137-his edition

of Suidas, XX 801.

(H. C.), his work on insects, IX.

Kustrin, Prussian town, XIII. 187. KUTAIAH, Turkish town, XIII 197. Kutais, XIX, 551.

KUTTENBERG, in Bohemia, XIII. 137. Kutusof (General), X 188, 156 et seq. Kuyp (Albert), landscape painter, XIII. 187; XVII. 75.

Krablite, mineral, XV 70.

Kraft (Prof.), his experiments on the Kyan (J. H.), his method of preserving

# KYA-LAC

wood, V. 178; XX 167; XXI 279—ropes, XIX 412 Kyanite, mineral, electricity of, VIII. 538 Kyle, district, IV 332. Kyloes, west highland cattle, II. 342. Kyrosite, XV 115.

# $\mathbf{L}$

L, letter of the alphabet, XIII. 138-in abbreviations, II 19 Laaland, Island, XIII 138, VII 746 Laason bridge, in lower Silesia, XII.

LABADIE (Jean), XIII 138-Labadists, ib. LABARUM, Roman standard, XIII 138 Label, in architecture, III 510-in heraldry, XI. 326

Labeo (C. Antistius), Romanlawyer, XIII. 138.

genus of fishes, XII 257 Laberbus, genus of fishes, XII 257
LABERIUS (Decimus), Roman knight, XIII.

Labiatæ, nat order of plants, V. 202region of, 227; XVII 627 Labiate corolla, V 124

Labiatiflorae, nat order of plants, V 197 Labidus, genus of insects, IX 194 Labillardière (Monsieur), on the natives of New Caledonia, IV 266 La Borde (Jean Benjamin de), XIII on the natives

139

Labour, Coulomb on daily, VII 464-proper duration of daily labour for men and animals, XIV 417-wages of, VII 376, n; difference of, m Manchester and Glasgow, XIV 258—the only source of wealth, XVIII 224—means of encreasing its productive power, 227-combinaing its productive power, 227—combina-tions to raise the price of, VII 162— natural price of, XXI. 47 See Wages——(division of), VI. 316; VII 429; XIV 274; XVIII 228—its effects on

mental character, III. 707-its advantages, VII. 195-its disadvantages, 457 —limited in agriculture, admits of greatest extension in manufactures, 192.

-, in prison discipline, XVIII 572, 573

Labourers and their employers, laws relating, to, XIV 346—number of farm labourers in England, VIII 725—agri-cultural labourers, health of, XIV. 442—taxes on the articles consumed by labourers, XXI 49-improved condition

of, 678—wages of, 679. Labphak, runs of, II. 697. LABRADOR, XIII. 139

-, felspar, XIII. 140-rock, XV. 135. See Labradorite.

Labradorite, mineral, XV 71. Labram(J.D), his work on insects, IX. 20. Labrax, genus of fishes, XII. 275-fossil,

Labroidei, family of fossil fishes, XII 346 Labrus, genus of fishes, XII 266-fossil, 346-section of a tooth of, XVI 411pharyngeal bone and teeth, 421.

LA BRUYERE, XIII. 141. See Bruyère. LABUAN, Bornescisland, XIII 141; V 49,

Laburnum, XVII. 759, 762. LABVENTIT, XIII 141—Egyptian, III
437, VIII. 503—of Cnossus, VII. 41—
tomb of Porsenna, ib.—of the ear, III. 46; XVII 679.

Labyrynthibranchidæ, family of fishes, XTI 289

Labyrinthodon, fossil reptile, XVII 187, 138; XXI. 788—teeth of, XVI. 412, 431; XVII. 187

Labyrinthodontia, fossil reptiles, XVII.

LAC, XIII 141, 147; IX. 178; VIII. 285, 290-its use in electrical experiments, 540-lac-varnishing, XII. 699; XXI 526 in Siam, XX. 288—in making sealing wax, XXI. 779.

# LAC-LAF

La Caille, XIII 141 See Caille Laccadives, islands, XIII 141; XVII 583

LACE, XIII 142—weaving of, XXI 780—gold and silver, XIII 145—manufacture of, VII 451-at Tiverton, 764-of England, VIII 732—Ireland, XII 521 —Brussels, V 700—Mechlin, XIV 418 —Neuchâtel, XVI 153—Nottingham,

Lace-bark-tree, V. 205 LACEDEMON, XIII 145, 147. See Sparta. LACEPEDE (B G Etienne, Comte de), XIII 145-on reptiles, XIX 16, n 2 82-on the frog, 75-on the pike, XII 954

Lacerta, genus of reptiles, XIX 28 Lacertia, reptiles, teeth of, XVI 488 Lacertilia, fossil reptiles, XVII 153geological distribution of, 154 Lacertinidæ, family of reptiles, XIX 27 LACHESIS, XIII 146, XVII 272

Lachlan, river, XV 697
Lachlann (Karl), XIII 146, XVII 526
—his edition of the New Testament, XIX 837-on Homer, XI 600, 601 Lachnolaimus, genus of fishes, XII 267 Lachryma Christi, wine, XXI 159, 889 Lachrymal bone, III 22—orifices, 45 gland, 45-in brutes, 97

LACHRYMATORY, XIII 147. Lacistemaceæ, natural order of plants,

LACKER OF Lacquer, XIII. 147, XXI 526—of Japan, XII 694—lacquering furnace, X. 856.

LA CONDAMINE, XIII 147. See Conda-

LACONIA, XIII 147; XI 13; XX 499 et sea

LACONICISM, XIII 148 Lacordaire (J T), his work on insects,

IX 18. Lacquer. See Lacker Lacroix's differential calculus introduced

at Cambridge, I 807—on Euler, V 88
Lactanus, genus of fishes, XII. 298
Lactation, XIV 441.
Lacteals, II 803; III 62—discovery of,
II 761—wanting in the invertebrata,
XII 311

XII. 27.

Lactrice verosa, a poison, XIV 487, 488. Lactucarum, Opiate, XIV 487, 488. Lactucarum, Opiate, XI. 748; XIV. 487. Lacunar, in architecture, III. 510.

LADAK, in Asia, XIII 149 Ladanum, V 183; XVI 121 Ladies of the household, XI 776—of the bedchamber, ib —Sir Robert Peel's proposal to displace, XVII 364.

orders of knighthood for, XIII.

Ladikiyeh, or Latakıa, XIII 246. Ladıslaus (Posthumus), XII 18. Ladoga, Russian lake, XIII 150; IX 584, XVII. 492, XIX. 516 LADRONE ISLANDS, XIII. 150; XVIII

LADY, XIII 150-lady's horse, XI. 653. Lady-bird, insect, IX 152 LADY-DAY, XIII 150

LÆLIUS SAPIENS (C), XIII. 150. Læmargus, sub-genus of fishes, XII 825

Læmodipoda, genus of Crustacea, VII 542.

Læna, genus of insects, IX. 182.

LAENNEC (R. T. Hyacinthe), XIII 150stethoscope invented by, XX 694 LESTRYGONES, fabulous giants, XIII. 151. Laet (De), on birds, XVI 725 LAFAYETTE (Gilbert Mottier), XIII 151; X. 51 et seq, 122, 196—death of, 210—

his aid to the Americans, V. 488; XXI. 437-his friendship with Washington,

(Madame), XXI. 759. town in North America, XIII. 151 Lafitte (M ), X. 200 et seg , 204.

# LAF-LAK

Lafreisnage (Baron F. de), his work on insects, IX 15

Laganinæ, echinoderms, XXI 991. Lagny, on the quadrature of the circle, I 700, XX. 523

Lagoa dos Patos, lake in Brazil, XIX

LAGO-MAGGIORE, XIII 151, 644, 810, XII 687; XIX 633; XXI 248—islands in, V 54—temperature of, VI 777. Lagomys, genus of mammalia, XIV 188 LAGONEGRO, in Naples, XIII 151. LAGOON, XIII, 151—on the shores of the

Adriatic, 644 Lagopus, genus of birds, XVI 791. 

LAGOSTA, island, XIII 151 Lagostomus, fossil species of, XVII 173 Lagothrix, genus of mammalia, XIV 142 Lagrange (Joseph Louis), XIII 152, I 809, 810-his application of continued

fractions to the solution of numerical equations, 706—on the calculus of variations, 716, 785—sketched the theory of derivative functions, 601 discussed the chief difficulties of the theory of hydrodynamics, 723-on the lunar and planetary motions, 785-his solution of the problem of disturbing forces, 786-compared with Laplace, 821-on the voluminous nature of ma s21—on the voluminous nature of mathematical literature, 804, n 2—his writings, 813—his private character, 814—on waves, XII. 78—on the calculus of sines, II. 555—his astronomical discoverage III. 811—on the mical discoveries, III 811 - on the strength of columns, VI. 250—on the orbits of comets, VII 168—on the propagation of sound, II 104—on dynamics, VIII. 365—on equations, IX

289, 299, 806, 308—on fluxions, 677. Lagria, genus of insects, IX. 138 Lagriariæ, family of insects, IX 133. Laguna, in Teneriffe, XIII. 157, VI 166 – de Bay, lake, XIII 742

Lagunes, XVII 583 See Lagoons Lahire See Hire (Philippe de la) LAHORE, in Hindustan, XIII 157; V 670; XI 509; XVIII 690—railway, 689—climate, ib —meteoric stone in, XIV. 629—rock salt of, XI 457—captured by the Sikhs in 1756, XVIII 692 Laicharting (N. de), his work on insects,

IX. 7. Laidlaw (William), XI. 556 LAIGLE, French town, XIII. 158 LAING (Malcolm), historian, XIII 158— his memoirs of Dunbar, VIII 245 et seg. on Ossian, XVII. 6—his character of Spotswood, XX. 518

(Mr), on the agriculture of Denmark, VII 747—his account of Norway. XVI 320 et seq

- (Major), his travels in Africa, II 210-reaches Timbuctoo, X 477. (Captain), III. 726

Lair (Pierre-Aimé), on Cherbourg docks,

V 805, 806 Laird (Macgregor), his expedition to the Tschadda branch of the Niger, XVI 266-his iron steam-vessels, XX. 137.

Laire on early printed books, IV. 708 Lairesse (Gerard), painter, XIII 158 Lake, (Lord), XI. 504 et seq —his attack on Bhurtpore, IV 693—his capture of Allyghur, II. 595—his victory at La-swaree, XIII. 246.

- of the Thousand Isles, in North America, XIII 158

- of the Woods, in North America, XIII 159.

pigment, VIII. 284. trout, III 156.

Lakes, X 483; XVII. 591—influence of the sun's reys on, VI. 177—height of, among the Alps, II. 625—their temperature at different depths, VI. 777 in landscape gardening, XVII. 772—in Scotland, XIX. 794—sea lochs in, 1b— in Cumberland, VII. 578—of England, VIII. 716—of Europe, IX. 885—of Egypt, VIII. 428—of Canada, VI 136 et seq —

# LAK-LAM

salt-lakes, XVII 591—lake basıns, 1b —tepid lakes ın Portugal, XVIII 393 the different Countries of the World

Lakono, king of Bary, XVI 270, 271 Lalande (J J Lefrançais de), XIII 159 -his astronomical labours, III 806on the sun's motion, IV 28, and spots, 80-on the diminution of the obliquity of the ecliptic, 13—his catalogue of stars, 95, I 836—spiders swallowed by, III 379-on a fall of meteoric stones, XIV. 630

-(Leon), his work on the Lepidoptera of France, IX 16.

Lally (Count), XI. 485 Lama, XIV. 205 See Llama. Lamalmon mountains, in Abyssinia, II.

LAMARCK (J B P Antoine de Monnet). XIII 162-his classification of the mollusca, III 183-of animals, 175, 176of the infusoria, 194-first made the arachnides a separate class, 367—his system, 369—on the relations between comparative organizations, 187 -on the appendiculated infusoria, 202 on the eyes of the cercana, 203 on the crustacea, VII 540—his division of the annelides, XI 294-absurdity of his views regarding the develop-ment of different forms of animals, III 189, n—on the brain, XVII 560—on zoophytes, XXI 976 et seq—his arrangement of the echinoderms, 986. Lamarque (General), X. 207

Lamartine, X 197, 232—on the use of coffee in the East, VII 54—his History of the Restoration, X. 187—on the con-duct of Charles X, 193—his poetry, XVIII 117

Lamas, Buddhist priests, XIII 163-re-ligion of, in Ladak, 149

LAMB (Charles), XIII. 163-Talfourd's Life of, XXI 7—his criticism on Hogarth, XI 555—on Haywood, 366. - (WM ), Lord Melbourne, XIII. 164

-his administration, V. 664 and Summer's superheating apparatus, XX 650-their patent sheet-flue

boilers, 651 Lamballe, French town, XIII 164.
— (Princess de), X. 67, 69.
Lambay, island, VIII 214, 215. Lambdoidal suture, III 27
LAMBERT (John), XIII 164.

(Daniel), VII 414

(JOHANN HEINRICH), XIII. 165his character as a philosopher, I 189, and n 3-incommensurability of the circle first demonstrated by, 700-his treatise entitled Photometria, 754-on the orbit of comets, VII 168-his Theorem, ib, 175—his dial, 792—his Pyrometric, I. 946—on breast-wheels, XII. 165—on heat, I. 946; XI. 262—on magnetism, XIV. 5—on the height of the atmosphere, 719—on mortality, XV 633—on optics, XVI. 585—photometry, XVII. 555—on acoustics, XXI. 360

\_\_\_\_\_, painter, XVII. 79. Lambertini (Prosper), IV. 645. Lambeth, XIII. 660; XX 886, 887— palace, XIII 669—founded by Baldwin, IV 394—hbrary, XIII 395

Lambinet's work on the origin of printing, TV 707 LAMBOURN (Chipping), town in Berks,

XIII, 168 Lambs, management of, II. 353—lambing season, 348, 352—flesh of, IX. 762—leather from the skins of, XIII 305.

Lambton (Col.), his measurement of an arc of meridian, I 775, 853; IX. 552. ——— (Mr), his reform bill, V 682. Lamego, Portuguese town, XIII 168.

Lamelları, genus of Mollusks, XV. 384 Lamellibranchiata, class of Mollusks, XV. 340, 322—fossil, XVII 105—classification of, XV. 847-generation and development of, 854

Lamellicornes, family of insects, IX 117. Lamellirostres, family of birds, XVI 815.

#### LAM—LAN

LAMENNAIS (Felicité Robert), Abbe de, XIII 168

Lamia, town in Greece, XIII, 168 \_\_\_\_\_, genus of insects, IX 146 Lamiaceæ, nat ord of plants, V 202. Lamianæ, family of insects, IX 145 Laminated structure in volcanoes, XXI. 604.

Lamination, in rocks, XV. 154, 156,

Lamlash, in Arran, III. 676; VI. 27. Lammas, XIII 168

Lammer-geyer, bud, XVI 740; II 626 LAMMERMOOR HILLS, XIII 169, IV. 679; XI 177.

Lamna, genus of fishes, XII 322, 324—fossil, 341—section of tooth of, XVI 411—jaw and teeth of, 422 Lamnidæ, family of fishes, XII 322,

Lamnodus, genus of fossil fishes, XII 337

Lamoral (Count Egmont), XL 563, 566. LAMOTTE-FOUQUE (F H K., baion de), XIII 169

LAMP, XIII 160—manufacture of, at Birmingham, IV. 782—aphlogistic, or flameless, III 294—Davy's safety-lamp, VII 124, 671. See Safety-lamps Argand, III 524-electrical, VIII 625lighthouse lamps, XIII 409 et seq — Fresnel's mechanical lamp, 473—for microscopes, XIV. 798-lamps for railway signals, XVIII 778

Lampa, in Peru, XVIII, 695. Lampadephoria, XIII 173 Lampangs, people of Sumatra, XX 805 Lampas, an affection in horses, XXI 564

LAMP-BLACK, XIII 178; XII 665 LAMPEDUSA, or Lampedosa, island, XIII. 173, V. 594; XX 246 Lampern, fish, XII, 228

LAMPETER, in Wales, XIII 178-College, founded by Bishop Burgess, V. 772. Lamp-micrometer, XIV. 757.

Lampong, in Sumatra, XX 806 Lamprey, fish, XII 228—its respiratory organs, III 118—as food, IX 763—Dr Glay's arrangement of the Lampreys, XII 229.

Lampridius (Æhus), historian, XIII 173. Lamprima, genus of insects, IX. 128 Lampris, genus of fishes, XII 299 Lamprosoma, genus of insects, IX 149. Lamprotornis, genus of birds, XVI.

Lampsacus, or Lamsacum, XIII. 173— coins of, XVI 374 Lamp-shells, XV 336, 337—fossil, XVII. 103.

Lampugus, genus of fishes, XII 298 Lampyrides, family of insects, IX 107. Lampyris, genus of insects, IX. 107-L. noctiluca; see Glow-worm Lana (F.) on aeronautics, II. 168; IX.

Lanai, island, XVIII 270. LANARK, XIII 178—New Lanark, 174— cotton mill at, VII. 215 Lanarkite, mineral, XV. 105.

LANARKSHRE, XIII 174—cotton factores in, VII 451—horses of, II 388, XI. 662—iron ores of, XII 540—agricultural statistics, XIX 796, 797, 798 population, 799

LANCASHIRE, XIII 176; VIII 754— method of working coal, VII 121—of making butter, 623-number of mills in, XIV. 252—and power-looms, ib — silk mills, 254—culture of gooseberries in, XI. 718-paper-making in, XVII.

259
LANCASTER, XIII 180—Chancellor of the Duchy of, VI 411
\_\_\_\_\_, in Pennsylvania, XIII 180.
\_\_\_\_\_, in Ohio, XIII 180
\_\_\_\_\_\_(Str James), XIII 180.
\_\_\_\_\_\_(JOSEFE), XIII. 181—his schools, VI 830

- (Mr), his gun, XI. 128. - Sound, XIII 181; X 478; XVIII. 168, 171 el seq.

R

# LAN—LAN

Lancaster Canal, XIX, 11, 12, XIII Lance, spear, III 685 Lancelet, fish, XII 205, 227, 208

Lanceolate, leaf, V 90 Lancers, British, III 665 Lancet-arch, III 481, 510, XX 733 Lanchester, Roman station, VIII 207.

LANCIANO, town of Naples, XIII 181
Land, yielding no rent, XVIII 241—best
lands not always first cultivated, 245 evil effects of a minute subdivision of among tenants, VII 427; and propre-tors, 432—tenure of, in Egypt, VIII 428—rent of, in England, 724—land-measures, foreign, II 116—formation and reclamation of, from rivers, XVI 83-as a recipient and communicant of heat, XIV 643-in physical geography,

XVII 584 Landamman, XXI 494, 496. LANDAU, in Bavaria, XIII 181. Land-breeze, III 787.

LANDEN (John), XIII 181-his life, writings, and contributions to mathematics, I 717, and n. 2, 3-on fluxions, IX 677. LANDER (Richard), XIII 181-his discovery of the termination of the Niger, X 477; XVI 266—his second African expedition, II 210-accompanies Clapperton in his second expedition, VI. 752—his death, XVI 266—his account of Cuttup, XI 778

LANDERNEAU, town in France, XIII 181. Landes (Les), in France, XIII 181, X.

LANDGRAVE, XIII 182

Landings, in building, V. 739—in stair-cases, XX 792

Landon (Lætitia Elizabeth), XIII. 182. Land-presser, IL 273.

Land-rail See Corn-crake. Landrecies, X 87

Landsberg. Prussian town, XIII. 182. Landscape gardening, XVII. 771—paintıng, VÎII. 174

Landscapes, beauty of, IV 543 Landscrona, battle of, XX 852 LANDSEER (John), engraver, XIII 182 LANDSEND, XIII. 182

LANDSHUT, town in Bavaria, XIII, 182; TV 518

Land-soles, XV. 374. Land-tax, XXI 43 et seq, 47-its disastrous influence, 44—in India, XI 514—act authorising the redemption of, V 562-in Scotland, XIX. 809-in England, XXI 45-France, 47

Lane (E W), his work on the modern Egyptians, VIII. 444—his description of a Turkish bath, IV 506—on the extent of cultivated land on Egypt, VIII 421—on the Egyptians, 444, 446, 447, 452—his treatment of Dysentery and Ophthalmia, 423—on Osiris, 488—on the Vocal Memnon, XIV. 492

Lane's discharging electrometer, VIII.

Laneham, his description of a minstrel, XV. 258—on the morris-dance, 598 LANFRANC (Archbishop), XIII. 182; VIII. 668, 669

Lang (James), his rope-machinery, XIX

Langdale (Lord), on bastardy, IV. 493. LangeLand, Island, XIII 183 Langensalza, in Prussian Saxony, XIII 188

LANGENSOHWALBACH, in Nassau, XIII

LANGHOLM, XIII 183; VIII 288—Tel-ford's bequest to, XXI 146. LANGHORNE (John), XIII. 188

Langland (Robert), XIII 184; VI. 484
—quotation from, VIII 795. Langley (Batty) on pointed architecture,

Langon, in France, XIII. 184.

Langres, in France, XIII 184. Langside, XIII. 184—battle of, XIX 786 Langstaff (Mr), on the luminousness of the sea, XIII. 459.

# LAN-LAO

Langstroth (L L ), his work on bees, IX.

LANGTON (Stephen), Archbishop, XIII 184; VIII 676, 677—division of the Old Testament into chapters ascribed to,

LANGUAGE, XIII 185—probably imparted to our first parents by revelation, I 449—confusion of, at Babel, 465, 466 improvement of, the means of advancing science and learning, 39 - Rousseau and others on the origin and history of, 174, 176, n -superiority of English over French as an instrument of thought, 229, n 2-value of German, in some points of view, 311—Leibnitz on the etymological study of, 186, 262—inadequacy of ordinary language for the purposes of philosophy, 310—academies of languages, II 70—proposals for a universal, 611—affinities of, 775, 776—antennal language of ants, III. 263 -Aristotle on, 552-of brutes, V 704. XIII 185-deductions as to the origin and descent of nations from analogies of, VI 365 - metaphorical, IV 547figurative, VII 219-Condillac's theory of its necessity to the development of ideas, 234 — on the parts of speech, 235—teaching of, to the deaf and dumb, 675—by gestures, 677, 680—origin of, X. 744; XIV 559—all languages referable to a common origin, IX 354—of fal-conry, XL 248—languages of the Scriptures, XIX. 833—purpose and properhes of, 141 — African, II 221— American languages, 678 — Anglo-Saxon, III 165 — Arabia, 359—Celtic, VI 365, 366-Chinese, 571-Coptic, VIII 441, 447, XI 410 et seq -Cornish VIII 441, 447, XI 410 ttseq — Cornish, VII 408—Danish, 750—Dutch, XI 591—Egyptian, VIII 441, XI 409, 412—Etruscan, IX 360, 358—European, 389—Italian, XII 659—Javanose, 707—Lapland, XIII 244—Magyar, XII 18—Malay, III 749—Manx, XIV 246—Norse, VII 750—Osmanli, XXI. 382—Danish, 11 600—Romanli, XXI. 382—Danish, 11 600—Romanli, XXI. 382— Peruvian, II. 689—Romansch, XX. 890
—Russian, XIX 545—Sanscrit, III
749; I 204—Tartar, III ib.—Thibet, Zend, ib - faculty of, XVII 563. See Grammar, Philology, Alphabet, English, French, Greek, Latin, Sanscrit, åte.

Languedoc, in France, XIII 229; X. 277 —canal of 243, XVI 54. Languia, genus of insects, IX 151 Lanham, in Suffolk, XIII 252 Lanius, genus of birds, XVI 748 Lannes (Marshal), X 137 et seq , 152. Lansion, in France, XIII 229. Lansberg (Philip), III 578, 801. Lansdowne MSS, XIII 392. Lantanium, a metal, VI 488 Lantao, island, XIII. 229

Lantern, in architecture, III 510-of Demosthenes, 442, 462, IV 164-magic, XVI 696

-pinions, in clock-making, VII 36, 37, Inntern-fly, IX 169
——shells, XV 350
Lanterns, feast of, VI. 570.
Lanthanite, mineral, XV 100.
Lantoir (Banda), IV 409

LANUVIUM, now Civita Lavinia, XIII 229. Lanzerote, island, XIII 229; VI. 167 Lanzi (Luigi), XIII 229 on the character of Albani as a

painter, II 441-on Domenichino, VIII. 98-on the Etruscans, IX. 856-on painting, XVII 49 et seq LAOCOON,XIII 230, VIII 175; XIX 369 Laodamus, geometer, X. 499 Laodice, VI 222.

LAODICEA, XIII 230—medical school at, XIV 453

AD MARE, XIII. 281, 246. -Scabiosa, Syman province, XX 904 Laon, in France, XII. 281; X. 167. Laophis, fossil serpents, XVII. 163 Laos, in Asia, XIII, 281; X. 785; III 785; XX 281, 283 Lao-kiun, Chinese sectary, XV 761

# LAP-LAR

Laphria, genus of insects, IX 234 LAPIDARY, XIII 231—lapidary's com-passes, VII 221—saws, XIX 678 Lapis-Lazuli, XIII 232; XV 75—in Badakshan, IV. 359—Chih, VI 549— Asturias, IV 156-Tibet, XXI 247 Lapithæ, their battle with the Centaurs, VI 371, XIII 232 Lapithes, XIII 232, VI 371

LAPLACE (P S, Marquis de), XIII 232, I 814, 822—on the advantages of learned societies, 47—his Mécanique Celeste, 800, 821; XIII 233—on probabilities, I 223, 814, 819, XVIII 590—on capillary action, I 732; VI 210, 211, 215, XII 95, 97, 99—on the moon's secular equation, I 786—his improvements in the lunar theory, 814, on the moon's acceleration, 814, 11 74, III 812—his theory of Jupiter's satellites, I 815, 786, IV 73, 74—his discovery of the causes of the great mequalities of Jupiter and Saturn's motions, I 814, 815, III 812—his share in the discovery of the stability of the major axes, I 812 - on the limits of eccentricities and inclinations of the planetary orbits, \$12—on the inequalities of the moon's orbit, IV. 105 on the earth's attraction, I 851, n —lus theory of the tides, 816; XXI. 250—on adhesion, II. 140—on the propagation of sound, 105; his corcorrection of the theory of, I 891—his nebulan hypothesis, 848—on the values of annuties, III 231—on the utility of logarithms, 801—his astronomical discoveries, 812 on barometrical measurements, IV 465-on cohesion, measurements, 1V 465—on cohesion, VII 57, 58, 59—on the olbits of comets, 168—on electricity, VIII. 531—on meteorolites, XIV 638—on the diminution of evidence by being transmitted, XV 266—on heat, XI 273—on Lagrange, XIII 154—his excessive love of calculation, 157—on the pendulum, XVII. 850—his character as a physicist and author. I 820—compared physicist and author, I 820-compared with Lagrange, 821 — his public character, 1b — love of analytical display, 1b -his Systeme du Monde, 822-liis formula expressive of the relation of the pressure, and temperature of steam,

LAPLAND, XIII 233; IX. 386, 387— Lannæus's tour m, XIII 408—mission established m, XV 271—rem-deer of,

Laplanders, IX 387, 389-in Sweden, XX 864—their bows, V. 251—language, IX. 390 : XIII. 215

Lap machine, VII 443 Lapostolle (Mons), paragreles proposed by, VIII. 586

Lapwing, XVI 797—shooting of, XX 216. Lab, Persian town, XIII 244 LARCHER (Pierre-Henri), XIII 244.

Larch-bark, used in tanning, XIII 306.
Larch-timber, XVI. 101; XXI. 275—durability of, XVII 755—specific gravity of, XII 89—its use in joinery,

817—in ship-building, 178 Larch-tree, XVII. 756, 765—introduction of into Perthshire, XVII. 459. Lard, XVI 493

Lardizabalaceæ, nat. ord of plants, V 181.

LARDNER (Nathaniel, D D ), XIII. 244—

Kippis' edition of his works, 96.

(Dr), on the planet Saturn, IV 92

-on evaporation, IX 408, 409 -on smoke, XX 352 LARES, XIII 245; XVII 875; I. 514. Largo Bay, IX 794

Largs Day, IA. 798

Larks, village in Ayrshire, XIII. 245

Larks, Larks, Lown in Oudh, XX 805

Larks, XVI 759— of Dunstable, VIII

262—net for catching, XIX. 98—shooting of, XX. 216

Larimus, genus of fishes, XII. 285. LARISSA, in European Turkey, XIII 245. LARISTAN, in Persia, XIII 245. LARISTAN, in Antrim, XIII 245. LARNICA, town in Cyprus, XIII 245.

# LAR-LAT

Larra, genus of insects, IX 195 Larrates, family of insects, IX 195 Larus, genus of birds, XVI 812 Larva of insects, IX 53 et seq - of bees, IV 580

Larynx, XVII 679-muscles of, III 39anatomy of, 50-comparative anatomy of, 102-diseases of the, among cattle, XXI 571

Lascaris (Constantine), XIII 245 - (Andreas Joannes), XIII 245 Las Casas (Bartolommeo de), VI 306. Lasco (John à), XVIII 456. Laserna (General), IV 833 Lasiocampa, genus of insects, IX 213 Lasionite, mineral, XV 74 Lasioptera, genus of insects, IX 226 Las Palmas, XIII 246, or Palma, VI

Laspeyres (J H), his works on insects, IX 10

Lassa or H'Lassa, capital of Tibet, XIII 246

Lassell (Mr), his observatory near Liverpool, I 860—his discovery of a satellite of Neptune, and one of Saturn, 860, IV 92, 94—on the satellites of Uranus, I 860; IV 93—on Saturn and his ings, 92—his telescopes, XXI 128

Lassen (Christian), his philological researches, XVII 529, 534 Lasus or Lassus, Greek poet, XIII 246 Laswaree, in Hindustan, XIII 246 LATAKIA, port in the Levant, XIII 246

Latch locks, XIII 541 Latch locks, XIII 541

Latent heat, XI 209, 271; XX 555—
Regnault on, I 968—absorbed in melting ice, 926—Dr Black's discovery of, 760, 926; IV 788—of vapour, I. 926—of steam, XX 566, 567, 568, 571—Cavendish's experiments on, I. 930—phenomena explained by, XI. 270, 271; I 926—Lavoisier on, 932

LATERAN, XIII 247—councils, VII 465.

Lateran, XIII 247—councils, VII 465.
— (St John), basilica, XIX 368
Lates, genus of fishes, XII 275—fossil,

XIII 195 et seq —his contributions to philology, XVII 528 —— (Dr) his edition of Sydenham's

works, XX 893 Lathe for turning, XXI 390. Lathrobum, genus of insects, IX. 108. Laths, plastering on, V 741, 742 LATIOLAVE, XIII 247, III 167 Latilus, genus of fishes, XII 278

LATIMER (Hugh), XIII. 247; VIII. 708—his account of cloth-making, XXI.

Latin church, VI 718-mysticism in, XV. 755—its claim to the guardianship of the holy places, XIX 500. ——language, XIII 218, IX 890—its

inflections, XIII 189 et seq -affinities, 218—its want of the article, X 752—grammars and lexicons, XVII 526—Bibles, IV 701; XIX 840—historical writers in, XI 548—editions of the classics, IV 709—moods and tenses, X 765 et seq, 769—papyri, XVII. 265— Latin poetry, XVIII. 103 Latins, XIX 295—Constantinople taken

by, VII 818.

Latistellati, echinoderms, XXI 991 Latitude, in astronomy, IV. 6—method of reducing geocentric to heliocentric, 57—tables for the moon's latitude in eclipses, 129, 180

, in geography, X 480; XVI. 7, 10, 8—mode of finding, IV 113; XVI 40 on globes, X. 486—ratio of fertility to, II 710—as given by Ptolemy, X, 467, 472—distribution of volcanoes in, XXI 603, 604-in connection with the trigonometrical survey, 385.

Latitudinarians, XIII. 248. Latium, XIII. 248. Lamus, mountain, XIII 248. Latopolis, in Egypt, VIII 513 La-tour-du-Piu, in France, XII 627.

#### LAT—LAV

LATREILLE (Pierre-André), XIII 248-his entomological works, IX 8, 9, 10—his classification of insects, 9-on entomology, 32 et seq -on the geographical distribution of insects, 67-on ants, III 261 et seq — his classification of the arachnides, 367, 370, 371—his assistance to Cuvier in the Règne animal, VII 605 Latridius, genus of insects, IX 142

Latrıs, genus of fishes, XII. 278 La Trobe (Mr), governor of Tasmania,

Latrobite, mineral, XV 71. Lattunouli, XIII 248. Latter-day Saints See Mormonism. Lattice-windows, X 670 LAUBAN, Prussian city, XIII 248 LAUD (William), archbishop, XIII 249-

his ecclesiastical and political conduct, V 393-ascendency over Charles I, 893 - accused of high treason, 398executed, 405—his treatment of Archbishop Leighton, XIII 322—tutor system introduced at Oxford by, XXI 455 - his constitution for Dublin university, 486

LAUDER (Sir Thomas Dick), XIII 250-on curing herring, IX 639

- town in Berwickshire, XIII 250 Lauderdale (Duke of), his administration in Scotland, V 429; VII 629 LAUDHON (G Ernest), Baron Von, Field-

Marshal, XIII. 250; XVIII. 653 et seq See Laudon. Laudon (Marshal), XXI. 371. See Laud-

LAUENBURG (Duchy of), XIII. 250, VII

746 Laughing-gas. See Nitrous Oxide Laughter, death from, VIII 192, n 1 Laumonite, mineral, XV 77.

Launceston, town in Cornwall, XII 250—coining of tin at. VII. 407.

- in Tasmania, XXI 31. Launch, boat, IV 800. Launching of ships, XX. 205. Laura, XIII, 250 Lauraceæ, nat ord of plants, V 204.

Laurel, order of plants, V. 204. - trees, XVII 761 Laurence (Archbishop), on the books of

Esdras, IX. 332 LAURENCEKIRK, XIII. 250, 89

Laurentian library, IX 666, XIV 447 LAURENTUM, town of Latium, XIII. 250,

LAURIA, town of Naples, XIII 250 Laurie's floating mattresses, XIII 440. Laurus on acronautics, II 168. LAURVIK, town in Norway, XIII 250. LAUSANNE, in Switzerland, XIII 250; XX 882; XXI 531—library at, XIII

Lauterbourg (Mr and Mrs), mesmensts, XX. 431.

Lauth (Dr T), his History of Anatomy, II. 777—on the lymphatics, 804 Lauxania, genus of insects, IX 251

Lava, its difference from trap, XV 190of Ætna, II 192—Vesuvius, 192, n —Iceland, XII 202—lava streams, XXI 605-dykes and veins of, XV. 191—feldspathic, augitic, and intermediate, 132, 133

LAVAL, in France, XIII. 251-linen manufactures of, X. 254.

LAVATER (Johann Caspar), XIII 251magnetic somnambulism, XX, 442. LAVAUR, town in France, XIII 252 LAVENDER, XIII 252; V 202, XI. 745-

oil of, XVI 497

Lavendulan, mineral, XV. 104 LAVENHAM OF Lanham, in Suffolk, XIII.

Laverna, goddess of thieves, I 459 LAVINIUM, city of Latium, XIII. 252,

LAVOISIER (Antoine Laurent), XIII 252; I. 932—on heat, 982; XI 273—his chemical theory of combination and xudation, I. 932—on the composition of the atmosphere, IV. 180—his airpump, XVIII. 42—on electricity, VIII.

#### LAV—LAY

531-his death, I 933, X 85-his memoir on heat, in common with Laplace, I 820-his theory of combustion modified by Sir H Davy, 971

LAVORO, Terra di, XIII 252, XII 636; XX. 236

Law, XIII 253-Athenian, IV. 218, 215 -English, VIII 779-French, X. 132, 280-Lombardy, XIII 645-Egyptian, VIII 440—Mosaic, IV 694; I 467 et seq —Chinese, VI. 564—Hindu, XI 476— Scottish, XIX 750; its difference from that of England, 811-Venetian maritime, VII 533—Academies of, II 69— the Economists on, VIII 379—Institu-tion connected with, in London, XIII 672-Courts of, in Edinburgh, VIII 395-constitutional, 781-of the relations of private life, ib -Roman actions at, II. 119-capitularies, VI 220-Jury trial, XIII 22-law language and literature, 271—laws regarding the insane, XIV 538—martial law, XV 5—duty of obedience to, 570-maritime, declara-tion respecting, XVI 157-Plato on, XVII 810, 811—taxes on law pro-ceedings, XXI. 65—Schools of, in United States, 494—See Canon Law, Civil Law, Code, Courts, Crime, Feudal Law, Jurisprudence, Law of Nations, Law of Nature, Legislation, Medical Jurisprudence, Police, Prisons, Punish-

- making, XIII 267

- Mosaic See Mosaic - of Nations, XIII 279—blockade, IV 786-are all treatise annulled by war? V 588 See Balance of Power of Nature, XIII 253, 254

— (John), projector, XIII 292; X 35 his schemes opposed by d'Aguesseau, II 429

—— (EDMUND), bishop, XIII 295—his notes to his translation of Archbishop King's work on the Origin of Evil, I 170—his speculations on space and time, ib, n 2—his ethical works, 171-2 -(WILLIAM), XIII 296

Laws of the Twelve Tables, VI 739, XIX. 301.

Lawburrows, taken out by Charles II against his Scottish subjects, V 429 Lawers (Ben), mountain, botany of, XVII 458

Lawes (Mr), his agricultural practice, II 293, 309

LAWN, XIII 296, 495. LAWRENCE (Sir Thomas), painter, XIII 296, XVII 56

(Sir Henry), XVI. 307. (Sir John), XVI 308, 309; XVIII

(Sir James), on nobility, XVI 281

(Mr), his mode of preparing varnish for etching, VIII. 811

town in Massachusetts, XIII 297.

(Sr), GULF of, XIII 297.
(Sr), GVLF of, XIII 297.
(Sr), nver, XIII 298; II 675;
VI 133, 140; XV. 521; XVI 214.
XVII 600, 605, 647—shores of, VI 132, 133—trade of, 148-9—canals, XV. 522;

VI 155 Lawson (Messrs), on grasses and pasture plants, II 324—on the varieties of the potato, 315

Lawyers, diseases of, XIV 442
Laxford (Loch), XIX 794
Layard (A. H.), on the buildings of Assyria
and Babylonia, III. 499 et seq.—on the honeysuckle ornament in architecture, 501—on the runs of Babylon, IV 348
—magnifying lens found at Nimroud
by, XIV 763—his discoveries at
Nineveh, XVI. 274—on impressions on Assyrian bricks and tablets, XVIII 521

LAYBAOH, Austrian town, XIII 298—congress at, V 631; XII 655
Laycock(Prof), on the action of the brain, XVII 560

Layers, propagating by, XI 694, 708; V 167; XVII 767. Laying-off, in ship-building, XX. 183

#### LAY—LEA

Laynez (James), Jesuit, XII 751. Layon, canal of, XVI 6, n Lazarettos, XIV 445—Howard's examination of, XI. 785, 786-at Marseille, XIV 317

LAZZARTES (The), priests, XIII. 298.
LAZZARTES (The), priests, XIII. 298.
LAZZARON, XIII 298—of Naples, X. 110

and species of Unio, XV 349, 328 Leach (Dr), on the crustacea, VII 540, 544—on the myriopoda, XV. 747—nis contributions to entomology, IX 13

eachia, genus of mollusks, XV 400 Lead, XIII. 298; VI. 497, XV 66, 114— its use in assaying, III 770—sheet-lead, V. 755—compounds of, VI 497— use of its salts in calico-printing, &c, 497—its protoxide as a mor-dant, VIII. 280—chromate of, used in dying, 297, 318-window-frames of, X 670—specific gravity of, XII 88—its poisonous quality, XIV 433—produce n Great Britain, XV 242—exports from Newcastle, XVI 167—culmary utensils made of, XIV 440—distribution of, XVII 621—silver in Europe, mostly obtained from, XVIII 462—as a covering for roofs, XIX 374—action of water on, 617—cohesion of, XX 757—white lead, XIII 310, specific gravity of, XII 88—black-lead, see Plumbago— red-lead, XIII 802 See Lead mines – glance, XV. 117

mill X 670 mines, in Britain, XIII 298; XV. 242, 243, 244—Cardiganshire, VI 238— Cumberland, VII 577, XVI 167—Derbyshire, VII 754—Durham, VIII 266— England, 727—Clare, VI 758—Hindustan, XI 457—Ireland, XII 506—Europe, IX 387; XV 242—Illinois, XII 302—III 302—United States, XV 241—Montgomeryshire, 518—Missouri, 280—of Wanlockhead and Leadhills, VIII 238; XIII 175; XV. 246; XIX. 790—Soothead and Shapedian XV. 280 land, 804 — Shropshire, XX 229 — Spain, 489. See the Geographical Articles

Leadenhall market, XIII 664 Leadhillite, mineral, XV 105 LEADHILLS, XIII 302, 174, XIX 700— minerals found in, XIII 175—gold obtained from, XV. 233.

Lead-ochre, XV. 112. Lead-salts, XV. 104. Lead-spar, XV 105

Leadwort, order of plants, V 203 Leaf See Leaves

eating bees, IX 199 stalk, V 92 LEAGUE, measure, XIII 802

or alliance, French Catholic, X 88
—Solemn League and Covenant, V 404, VII. 469 — Anti-corn-law, 383; XIV 256—Amphictyonic and Achean, IX 497; II 727

Leake (Col), on the topography of Athens, IV 161 et seg —on Laodicca. XIII. 230-on Laconia, 148-on the means of reaching the sources of the Nile, XVI 269—on Greek coins, 359,

(Richard), XIII 302 (Sir John), English admiral, XIII 302

EAMINGTON, IN Warwickshire, XIII 302; XXI. 789—its mineral waters, XV 87. Lean (Captain Joel), his plan for ascer-

taining engine duty, XV. 227
LEANDER, XIII 308, XI. 354
Leao-Tong, Chinese province, XX 116 LEAP, in music, XIII 158. Leap-year, VI. 77

Leaping, action of the muscles in, III. 42—of horses, XI. 650, 662. Lear (Mr), on parrots, XVI 733

LEARCHUS, Greek sculptor, XIII 303, XIX 852 Learning, revival of, in Europe, VII. 535;

#### LEA-LEE

I 14; XIII 387-8-scholastic, XVII 521-pationage of ancient, in fifteenth

century, 522 LEASE, XIII 303—during the middle ages, II 252-in ancient Attica, IV 218. - (agricultural), VIII 725-advantages and duration of, II 365, in Scotland, XIX 799-in Ireland, XII 513ın Prussia, XVIII 665

LEATHER, XIII 305-currying of, VII. 595—manufacture of, in England, VIII 730—France, X. 256—Morocco, XV.

Leaven, in baking, IV. 380
Leaves of plants, V 85—vernation of, 86
—anatomy or structure of, 87—vascular

system of, 88-venation, conformation, and transformations of, 88, 89, 93-physiology of, 102—absorption and exhala-tion by, 103—their influence on vege-table secretions, 106—effects of gases upon, 1b -coloration of, 107-irritability and contractility of, 108-defoliation, 109, VII 698—time of unfolding, in different latitudes, V 220—propagation by single, XI 694—functions of, XXI 268

LEBADEA, town in Bœotia, XIII 311

LEBADEA, town in Bedoua, Alli 511
Lebaillif's sideroscope, XIV 89—his electric multiplier, XXI 642
Lebanon, XIII 355; XVII 182; XX
902—inhabitants of, 904—climate, 906 -cedar of, V. 209, XVII 756, 757,

- fossil fishes of, XII 354, 355 Lebia, genus of insects, IX 82 Lebiasina, genus of fishes, XII 251. Leblanc on crystallization, VII 546, 548

Lebon, X 93, n 1. Lebreux (F L), his work on insects, IX.

LEBRIJA, town in Spain, XIII 311 Le Biun See Brun (Charles le) Lecanu (Louis René), on the blood, II

LECCE, town of Naples, XIII 811. LECCO, in Austrian Italy, XIII 811 Lech, Prince of Poland, XVIII 187. Lechevalier, on the site of Troy, XXI. 356, 357, 858.

Lechler on the Presbyterian church, XVIII. 485 et seq

Lechuga (Christobal), his classification of cannon, XI 136 Lecomte's attempt on the life of Louis

Philippe, X 224 Leconte (J. L.), his works on insects, IX 23

Lecount (Mr), on magnetism, XIV 41. LECTISTERNIUM, XIII 311. LECTOURE, town in France, XIII 311

LECTURE, XIII 312-right of publishing lectures, VII 359 Lecythidaceæ, natural order of plants,

192 LEDA, XIII 312; VIII. 86.

fossil mollusks, XVII 106
LEDBURY, in Herefordshire, XIII 812; XI 349, 350.

Lederite, mineral, XV 77 Ledger, V. 23—balancing of, 27—size and index to, 28.

Ledges of ships, XX 187 Ledra, genus of insects, IX 170

flax, IV 768

(NATHANIEL), XIII 812. (John, D D), XXI. 482. (SAMUEL, D D), XIII 812.

(Harriet), her novels, XIX 270

—— (Wilham) alleged inventor of the stocking frame, XX 706. LEEOUES, XIII 812; XI 303, 805—green

leech 305-bleeding of, 804-horseleech, 806—land leeches, 802 n; in Assam, III. 764—American, XI. 805, n. 2—among the Himalayas, 444 absurd practice of applying them to bruised parts, XX. 830—fossil leeches, XVII 118.

LEEDS, town in Yorkshire, XIII. 312-

XVI 184

232

#### LEE-LEI

"Mercury," newspaper, XVI. 186—rule for estimating horse power in steam-engine, XX 602—woollen manufactures, XXI 918, 919-wages, 1b LEEK, in Staffordshire, XIII 316

, plant, V. 79, 88—culture of XI.

Leemans (Dr.) on the demotic characters of a papyrus, XI 377. LEER, town of Hanover, XIII 316 LEEUWARDEN, town of Holland, XIII 316 Leeuwenhoek. See Leuwenhoek

LEEWARD ISLANDS, XIII 316 Leeway, XVI. 13, XX 4 Lefebure (A), his works on insects, IX 15

Lefebvre (Marshal), X 154 Lefevre (Tannegui), IX 526 Lefkosia, in Cyprus, XIII 316, XVL

Lefroy (Lieut Col.), his tables of ranges for ordnance, XI. 146 Leg, muscles of the, III 39-station on, 41-motions of, 42-legs of insects, IX

49. Legacy-duties, XXI 64-objection to, 67 Legaspe (Lopez de) his visits to the Ladrone islands, XVIII. 268.

Legate, XVI 392.
LEGATION, XIII. 316. See Diplomacy,
Ambassador.

Legat (F), on engraving, VIII 805.

LEGATUS, XIII 316
Leg-bone, III 35—in the mammalia, 82—

in birds, 86

LEGENDRE (Admen Marie), XIII 316, I 822—his researches on elliptical functions, ib—onthe attraction of ellipsoids, 823 - his method of least squares 819, XVIII 635—on the orbits of comets, VII 169, 170, 176—on the figure of the earth, IX 552, 565—his

ngure of the earth, 12 502, 505—his work on geometry, X 505.

Leg-evil in sheep, XXI. 563.

LEGENOR, XIII. 316—improved by Sir Robert Dudley, VIII 229.

——bonnets, XI. 243

LEGION (Roman), XIII 818, III 630— its mobility, III. 634—the thundering legion, III 280, n. XIX 344—of Honour, X 126, 280, XV. 793

Legislation, XIII 262—of Draco and Solon, IV 213—limits of its action, XIII 264—over-legislation, 265—and jurisprudence, different senses of the terms, 267-medical, XIV 45-for rail-

ways, XVIII 796; reform in, 797 Legislature, XIII. 267—of the United States, XXI 429.

LEGITIMACY, XIII 818—by subsequent marriage, XVII 274 Legume, V 136

Leguminose, nat ord. of plants, V. 190 Leguminous plants, V. 186, 190—culture of, XI. 738—crops, II. 312—used as food, IX 760—seeds of, XVII. 769.

Lehmann (J. G) on the papillae of the nerves. II. 816. Lehrbachite, mineral, XV 117.

Lehuntite, mineral, XV 75 Leia, in the Punjab, XVIII 690, 691 - genus of insects, IX 229 Leiacanthus, genus of fossil fishes, XII

340 . XVII 117 LEIBNITZ (Gottfried Wilhelm), XIII. 818on the ments of Descartes, Hobbes, Bacon, and Campanella, I 26—his objection to Malebranche's views regarding cause and effect, 78—his veneration for the Roman law, 92—his misapprehension of Locke's doc-

trines on the origin of knowledge, 118-his school, and its distinction from that of Locke, 122—effects of his comprehensive correspondence, 123 on the expediency of literary intercourse among men of science, 123, n -coincidence between him and Cudworth concerning innate ideas, 128the metaphysical theories to which he chiefly directed his attention, 124-the doctrines of pre-established harmony,

124, 125-contrast between his specula-

tions and the philosophy of Locke,

## LEI-LEI

126-his scheme of optimism, 127-his work entitled Theodicaea, 126, 127 n, 129 and n 4-maintained necessity, but opposed materialism, 128-on the soul, 128-injurious influence of the doctrine of fatalism, as treated by him, 129-on the principle of a sufficient reason, 180, 652, 653—his theory of monads, 131, 255; VIII 827—on the law of continuity, I 182, 257-8, 653-on the states of rest and motion of bodies, 257-on the existence of the soul after death, 259his habits of thinking biassed by geometry, 259-extension of his principle regarding the law of continuity by Helvetius, 135-on the etymology of languages, 136, 262—his proposition that all proper names were at first appellatives, 260—his genius, 137—credulity, 138, 261—value of his speculations in advancing knowledge, 138—estimate of his character by Bailly, 262 great variety of subjects on which he wrote, 262-his controversy with Dr Clarke, 139; VI. 758—on space and time, I. 142 n—small progress of his doctrines in France, 185, 186-contrast between the form of his writings and the character of his mind, 353—favourite maxim of, 353—his ethical principles, where to be found 353 citations from, on ethics, 353, 438, 439 on disinterested affections, 354egregious fallacy contained in a statement of, 854, 855-his correspondence with Newton on geometry, 636-was the second inventor of the new infinitesimal analysis, ib ; IX. 671-rapid spread of his geometry on the continent I 686-controversy regarding the new calculus, 637, IX 672; XVI 206-his rejection of the higher powers of the differences of the variable quantities objectionable,642—comparisonbetween him and Newton, 687-his algebraical discovenes, 711—great promoter of the Berlin Academy of Sciences, II 65an algebraical discovery of James Gregory claimed by, 559—hydrosta-tical fancy of, IV 459—his classifica-tion of books, 715—mactivity of matter denied by, VIII 327—on the laws of motion, 338, 341, 343—his envious detraction of Sir Isaac Newton. 354 - on a universal character, VI 417—his project for remodelling the Pandects, VII. 586—on the distinction between intuitive and symbolical cognition, XIV. 585, and n 4-on evil, IX 420—on music, XV 701—problem proposed by, in 1687, IX, 676—on metaphysics, 557 n, et seq—on the force and velocity of moving bodies, I 654 -philology advanced by, XVII. 528-on the strength of materials, XX. 763on the cosmological argument for the existence of God, XXI. 186 LEIGESTER, XIII 319—population, 321 mediæval roofs at, XIX 392, 393 —— Earl of, VIII. 713; XI 571 LEIOSSTERSHIRE, XIII. 320; VIII 754—sheep, II. 263, 345—poor-rates in, XVIII. 309 n 1—lace manufacture, XIII 145-wool, XXI 905. Leichhardt (Ludwig), his explorations in Leigh (Edward), XIII. 321.

\_\_\_\_\_\_, town in Lancaster, XIII. 321

Australia, IV. 257.

Leighs (loch) in Cavan, VI 348 LEIGHTON (Robert), Archbishop, XIII

(ROBERT) Archbishop, XIII 322; XX. 840. LEIGHTON-BUZZARD, XIII 824; IV. 569.

LEINE, river, XIII 324 LEINSTER, in Ireland, XIII. 324. Leiodes, genus of insects, IX 181. Leiodon, fossil reptiles, XVII. 153 Leiostoma, fossil mollusks, XVII. 110 Leiostomus, genus of fishes, XII 285.

LEIPSIO or Leipzig, XIII. 324—fairs of, IX. 468; X. 590; XIX 685—battles of,

## LEI-LEN

X 164,580; XVIII 657, XX 850—taken by Tilly, XX 849-university of, XXI -book trade of, X 592, V. 31libraries, XIII. 420

Leir, in glass-making, X 672 LEIRIA, Portuguese town, XIII 325 Leistus, genus of insects, IX 98 LEITH, XIII. 352-water of, VIII 394, 408—docks of, 75—meteorological observations at the Fort of, XIV 670 first Scottish newspaper published at,

LEITMERITZ, town of Austria, XIII 827 LEITEIM, Irish county, XIII 327—agri-cultural statistics, XII 516, 517 Leiuranus, genus of fossil fishes, XII

LEIXLIP, Irish town, XIII 329 Lejah, basaltic region in Syria, XX 903 LELAND (John), antiquary, XIII 830-his notice of Birmingham, IV 720 -Chaucer, VI 432-Manchester, XIV

(John, D D ), XIII 330 \_\_\_\_\_(THOMAS), XIII 330 LELY (Sir Peter), painter, XIII 330, III 714

Leman (Lake) See Geneva, lake of Lemandé (M.), his iron bridges, XII 581-2 Lemberg, in Austrian Poland, XII 830 -university of, XXI 492

LEMGO, German town, XIII 831. Lemma, Geometrical term, X 508 Lemming, in zoology, XIV 188; IX 887. Lemnaceae, nat ord. of plants, V 214. Lemniscate, X. 545.

LEMNOS, Island, XIII. 831-labyrinth in.

LEMON, XIII 331; V 186, XI 729— Juice of, a cure for scurvy, XVI 106 oil of, 496. See Citric Acid -, salt of, XIII 331 - grass, V 216.

(Mr), his discovery of a treatise by

Milton, XV 80 LEMONNIER (P C. Charles), XIII 331— his astronomical labours, III 806—on the electricity of the atmosphere, VIII 578—on the orbits of comets, VII 168 -his intercourse with Lalande, XIII

Lemur, genus of mammalia, XIV 145— its arteries, III 112—dentition of, XVI 455—flying lemur, XIV 150. Lemuridæ, family of mammalia, XIV 144

LENA, river, XIII. 333; XVII 605, 606, 647, XIX 548. Lenseum, in ancient Athens, TV, 164

Lenita, fossil echmoidea, XVII 100. L'ENFANT (Jacques), XIII 333. Lengren (Anna Maria), Swedish poetess, XIX. 699.

Length, measures of, XXI 808. LENNEP, Prussian town, XIII 333. Lenni Lenapi, Indians, II 696 Lennox, XIII 333. See Dumbarton

(Duke of), James I 's patent to for woollen manufactures, XXI 915 - (Earl of), regent of Scotland, XIX.

- Hills, XX 702. LENNOXTOWN, in Stirlingshire, XIII. 333. Lenocinium, XII 55 Lenormant (C), on the value of the shekel,

XVI 379, n 1 Lens, XIII. 452—crystalline, III 44, 95; XIII. 461; XVI 541; XVII. 678— burning, VI 1 et seq.; XI. 275—lenses for lighthouses, XIII. 472, 474, 480 for microscopes, XIV. 763 et seq —aberration of, XIV 771—different kinds of, XVI 561, 574—refraction by, 564, 565 et seq—formation of images by, and vision of objects through, 567-form of the images of objects produced by lenses of different sizes, 569—spherical aberration of, 571-non-spherical, 574-doubly refracting, 628-defects of large lenses for taking portraits, 569, 570, XVII. 558—lenses of telescopes, XXI 134 et

LENT, XIII. 333-in the Greco-Russian

#### LEN-LEP

church, XIX. 527—term at Cambridge, XXI 463

Lentibulariaceae, nat. ord. of plants, V Lenticular spar, crystallization of, VII.

552, 555 LENTIL, XIII 883; V. 89—culture of, II.

LENTINI, town in Sicily, XIII 383

\_\_\_\_\_, lake, XX 243
Lentulus (Publius), his alleged letter to the Roman senate, XII 765, and n 1 LEO I (Flavius), emperor, XIII 383 — III, the Isaurian, XIII 334, XII. 2—his edict against image worship,

XIII 641 V., the Armenian, XIII 334 -, of Byzantium, historian, XIII

334

Diaconus, XIII 335 Grammaticus, XIII 335

of Thessalonica, XIII 335
X (Pope), XIII. 335—sale of indulgences by, XII 377—life and pontificate of, XIV 448—age of, 459—Roscoe's life of, XIX 418

of Modena, on the Caraites, VI

de Juda, on the Caraites, VI 228 (LEONARDO), musician, XIII 386. , constellation, IV 12, 80 LEOBEN, Austrian town, XIII 836 LEOCHARES, Athenian sculptor, XIII. 336

LEOMINSTER, in Hereford, XIII 336—wool of, XXI 910 LEON, in Spain, XIII 886, 887; XX 493

-Moorish kingdom of, XX 461 town in Central America, XIII.

(ISLA DE), XIII 337. (NUEVO), Mexican State, XIII 837;

XIV 718, 728 - (Peter Cieça de), XIII 837. -, geometer, X 499

(Ponce Luis de), poetry of, XVIII.

Leonardo of Pisi, algebra introduced into Europe by, I 556, II 488; X. 504

da Vinci See Vinci

Leonards (St Lord) on the law of copyright, VII 362—on the usury laws, XII. 430—his error regarding the Theodosian code, VI 743

(St) College, St Andrews, XXI
478—its union with St Salvator's, 474. Leonforte, town in Sicily, XIII. 337.

Leonidas, king of Sparta, XX 500.
LEONINE VERSES, XIII 337
Leontes, Syrian river, XX 903.
Leopard, XIV 169—in India, XI. 445—in Java, XII. 704

Leopard's bane, plant, V 197. LEOPARDI (Giacomo) Count, XIII 838 Lepidolite, mineral, XV. 78. Lepidomelane, mineral, XV. 78.

Leopold, king of the Belgians, IV 608; X 205—letters of Louis Philippe to, X III., Duke of Austria, XX 884

-(Prince) of Dessau, XVIII 650 et seq.

-(Carl Gustav), Swedish poet, XIX. 698. Leopoldine Academy, II 62.

Lepadidæ, fossils, XVII 101. Lepadogaster, genus of fishes, XII. 215,

LEPANTO, town in Greece, XIII 839—battle of, XII. 456; XXI 869.
Lepaute (Mons.), his escapement, VII 10. Leperditia, fossils, XVII. 101. Lepidaster, fosil star-fish, XVII. 99. Lepido, Roman family, XIII. 889. Lepidodendron, fossil plant, V. 285. Lepidoganoidei, fossil fishes, XVII. 128. Lepidokrokite, mineral, XV. 108. Lepidoptera, order of insects, IX. 26, 208. Lepidopus, genus of fishes, XII. 294, 296.

epidosiren, genus of fishes, XII. 318; XVII. 189—dental system of, XVI 427. Lepidostei, family of fossil fishes, XII.

## LEP—LES

Lepidosteidæ, family of fishes, XII 317fossil, XVII, 126

Lepidosteus, genus of fishes, XII. 316, 317, 209; XVII 126, 128. Lepidotus, genus of fossil fishes, XIL 334. Lepidura prolongata, VII. 543. Lepidus, sedition of, XIX. 322 et seg. Lepileur (M.), on the Persian languages,

XIII. 208 Lepipterus, genus of fishes, XII. 285. Lepisma, genus of insects, IX 261 Lepismenæ, family of insects, IX. 260. Lepisoma, genus of fishes, XII 277. Lepontane Alps, II. 623, 624. Leporidæ, family of rodents, XVII 632. Lepornus, genus of fishes, XII 246 Leposternon, genus of repules, XIX 40. Lepracanthus, fossil fishes, XVII 117 LEPROSY, XIII. 339-in Alabia, III 354

in China, VI 586-in Egypt, VIII 423 Lepsius (Dr), on hieroglyphics, XI 376 et seq—his work on Egypt, VIII 502— his examination of the Labyrinth, 503—on the papyrus, XI 370, n 6—on the Egyptian "Book of the Dead," XVII 263—on the affinity of the Egyptian, Semitic, and Indo-Germanic languages, 534.

Leptacanthus, genus of fossil fishes, XII. 340; XVII 117.

Leptides, family of insects, IX. 232. Leptines, VI. 282, XI. 432. Leptis, genus of insects, IX. 232 Leptocephalidæ, family of fishes, XII 229 Leptocephalus, genus of fishes, XII 229 fossil, 347.

Leptocera, genus of insects, IX. 145. Leptogastor, genus of msects, IX 335. Leptoichthys, genus of fishes, XII 315. Leptolæna, order of plants, V 185 Leptolepis, genus of fossil fishes, XII 336 XVII 126, 127

Lepton, genus of mollusks, XV. 350. Leptonotus, genus of fishes, XII 315. Leptopleuron, fossil reptile, XVII. 129,

Leptolepidæ, fossil fishes, XVII 126 Leptopus, genus of insects, IX. 163. Leptorhinophis, genus of fishes, XII. 233. Leptosomus, genus of birds, XVI 778. Leptura, genus of insects, IX 146. Lepturetæ, family of insects, IX. 146. Leptus, genus of arachindes, III 389 Lepus, genus of mammalia, XIV. 187. LERIDA, Spanish town, XIII. 341. LERINS, Islands, XIII 342. Lernanthrope, genus of entozoa, XXI 982. Lerneopoda, genus of entozoa, XXI. 982. Lernos, or Lero, island, XIII 342 Lerot, in zoology, XIV 180—its hybernation, III 180

LERWICK, in Shetland, XIII. 342; XX. 113, 114

Le Sage. See Sage (Le). Lesbias, genus of fossil fishes, XII 347. LESBOS, Island, XIII. 342, XV. 285-coins of, XVL 375

Lesbros on hydrodynamics, XII 75, 121.

Lescalier (M.), on preserving timber, XVI. 99.

Lesghians, VI. 342—language of, XIII. 216.

LESINA, island, XIII. 342. Lesko, Prince of Poland, XVIII. 137, 140, 141.

LESLEY (John), bishop, XIII. 342. LESLIE (Charles), XIII 343-his rules for testing the genumeness of alleged miracles, XV. 266.

- (General), V. 395, 405 et seq. - (Sir John), XIII. 344—his Disser tation on the progress of mathemetical and physical science, I. 689-his early studies, 942-his essays on mathematics and electricity, 942, 943-travels, 943his essay on heat, 943, 944; XI. 263his differential thermometer, 944 (see Thermometer)—his minor writings, 945 -his philosophical character, ib. merits of his experimental researches, 946—part of the article Acoustics, in this work by, II. 100—on sound, 101,

#### LES-LEU

105-on the speaking-trumpet, 107-on Indian algebra, 488 - on the moon's light, IV. 41-his atmometer, 177-on solar heat, VI 2-on capillary action, 200-his photometer, 781; XIII 455on the cold produced by evaporation, VII 102-his method of artificial congelation, 104, 105; XL 271; L 945—on dew, VII. 767, 768—on heat, I. 942, XI 263, 264 et seq -on the supply of water to Rome, &c., XII 10, n 1-on the effect of waves, XI 218—his treatise on curve lines, VII 251—on one of the causes of decrease of temperature on ascending into the atmosphere, XIV. 640-his photometer, XVIII. 555-hst of articles contributed to this work by, XIII. 346; L. 975-on polar temperatures, XVIII. 177.

LESLIE, town in Fifeshire, XIII. 346. Lesmahagow gas coal, VII. 118. Lesparre, in France, X 632 Lespinasse, his hydraulic experiments, XII 112, 117.

Lesseps (M F. de), his proposed canal across the isthmus of Suez, XX. 789
LESSING (G Ephram), XIII. 346; XVII 524; XIX. 718—as a dramatist, VIII. -poetry of, XVIII 119

Lesson (M), on birds, XVI. 782, 766 Lesteva, genus of insects, IX. 104 L'Estrange (Sir Roger), XIII. 348, XVI.

Lestris, genus of birds, XVI 813. Lesueur, blind man, IV. 780. on the mollusca, XV 327. Letheby (Dr), on peat fuel, XVII. 358. Lethrinus, genus of fishes, XII 187. Lethrus, genus of insects, IX. 120. Letronne (M), on the vocal Memnon, XIV.

- on ancient Greek painting, XVII. 52 and n 5.

Letter locks, XIII 536.

Letters, classes and forms of, as used in printing, IV 707—encouragement given to, in China, VI. 576

of administration, duties on, XXI.

postal arrangements for the trans-mission of. See Post-office. - practice of opening, at the post-

office, XVIII. 405 et seq revival of, I. 14; VII. 535.
LETTERKENNY, in Donegal, XIII. 348;

VIII. 103. etterpress printing, XVIII 520 Letter-writing, XVIII. 327 — Walpole's letters, XXL 693, 694

Lettic, or Lettish language, IX. 392; XIII. 215.

Lettou (John), printer, XVIII 537; XXI. 401.

Lettres de Cachet, X. 43, 47. Lettsom's method of taking casts from

medals, VI. 325 Lettuce, V. 197; IX. 761—culture of, XI 743-as food for silk-worms, XX. 291. water, V. 214.

LEUCA (Capo di), XIII. 348 LEUCADIA, island, XIII 348, XII 452. Leuchtenbergite, mineral, XV 78

Leuchtenburg, Duke of, IV 607; XVIII 390-his galvano-plastic establishment, XXI 636.

LEUCIPPUS, philosopher, XIII. 348 Leuciscus, genus of fishes, XII. 356, 357fossil, 346.

Leucite, mineral, XV. 74—rock, 133. Leucocythemia, XVII 661. Leucophane, mineral, XV. 88. Leucophra, animalcules, III. 202.

Leucopis, genus of insects, IX. 257. Leucopyrate, XV. 115. Leucothyreus, genus of insects, IX. 124 Leuctra, in Bœotia, XIII. 349—battle of,

III 628; XX. 502, XXL 177. Leucus, VII 494.

LEUR, Swiss village, XIII. 349. Leupold, his fi.e-escape, XIII. 438—on bridges, VI. 282—his water-pumping steam-engine, XX. 575, 576. LEUSDEN (John), XIII. 849.

#### LEU-LEY

Leuthen, battle of, XXI 714. Leutke (Capt.), his scientific voyage, IX. 573 -his pendulum observations, 1b, 574.

LEUTSCHAU, Hungarian town, XIII, 349. LEUWENHOECK (Anthony van), XIII 349 —on anatomy, II. 763; IX 3—on the brain, 820, 821—on the muscles, ib.— his microscopic discoveries, III 197—on ants, 261-on spiders' threads, 376the wing scales of the silk-moth, XIV. 802-on the structure of teeth, XVI 409

LEUZE, town in Belgium, XIII 349. LEVANT, XIII 349; XIV 469—trade of England with the, VIII 732—plague of the, XVII 748

Company, XII 818.
LEVANTE, Sardinian province, XIII 349, X 452

LEVANTO, XIII 349. LEVEE, XIII 349

LEVEL and Levelling, XIII. 349-in mining, XV. 224. See Surveying Levellers, V 410, XII 495

LEVEN, in Fifeshire, XIII. 349. (Lord), V 404

(Loch), between Argyll and Inverness shires, XIII 350

- (Loch), in Kinross-shire, XIII 350, 94, XIX. 792-its trout, XIII. 94; XII.

river, in Fifeshire, XIII. 94. river, in Dumbartonshire, VIII. 235; XIII. 657.

Lever, XIV. 388; XX. 541-new property of, discovered by Æpinus, II. 164-saying of Archimedes as to the power of. III. 430.

- escapement, VII. 32

Leverner (M), his early investigations, I. 829—his prediction of the place and orbit of Neptune from the motions of Uranus, 827, 829; IV 93-preceded by Mr Adams in this investigation, I 830 -on the perturbations of Uranus. IV. 93-on the motions of Mercury, IV. 89, 90-his other researches, I. 832.

Levin (Rahel), XXI 524. LEVITES, XIII 350; I 488. LEVITICUS, XIII 351

Levyne, mineral, XV 76

Lewenhaupt (General), XIX 479, 480 Lewes, in Sussex, XIII. 351; XX. 838, 839-battle of, 840

- (G. H.), on the applications of phrenology, XVII. 565.

Lewin (J. Wilham), his work on the lepedoptera of New South Wales, IX.

(William), his works on insects,

IX. 8, 11.

Lewis (Dr), his method of taking casts from medals, VI. 325—on gilding, X.

- (F. H.), his design for the Panopfacon, III, 506.

- (General), his tabular view of the subjects of artillery, IIL 680-on howatzers, 700.

- (Sir George Cornwall), on the early history of Rome, XVI. 261; XIX. 300, 301—on the Pelasgi, XVII 371—as a philologist, 525.

- (MATHEW GREGORY), novelist, XIII. 353-his romances, XIX. 277.

- (Mr), American mesmenst, XX.

(Mr), his method of making ink, XII. 382.

island, XIII. 35L LEXICON, XIII. 358. See Dictionary. Lexicography, XVII 526. Lexington, skirmish at, V. 481. n Kentucky, XIII 373, 70.

LEYDEN, city of Holland, XIII. 353-papy rus at, XL 377—university of, 590; XXL 492—university library, XIII 422; XI 589—museum, ib—population, 582. —— Jar, I. 737; VIII 526, 611, 612,

613; XXI 95 and n, 4.

(JOHN), XIII. 353—on the Asiatic languages, 205 et seg.—on Borneo, V.

#### LEY-LIC

47-his connection with the Scots Magazine, VII 299

LEYDEN (Lucus von), painter, XVII. 74 Leydolt (Prof ), on nature-printing, XVIII. 555.

LEYTE, island, XIII 355.

Leyzin, in Switzerland, mortality and births in, XVIII, 349, 350 LHUYD (Edward), antiquary, XIII, 355

(Humphrey), his attack on Boyce, V. 254.

Liability, limited and unlimited, XVII. 313-limited, 316-evils of, 1b, 319, 322 -facilities it gives for swindling, 320application of, to banking, 323; its disadvantages, XV. 452-unlimited, XVII. 316.

Lias, XV 207-in Scotland, XIX, 793flora of, V. 236; XVII. 641-fishes of, XII. 348, 350, 352; XVII. 117, 125, 126, 140

Liautaud (Dr), on the tea-plant in Brazil, XXI 81

LIBANIUS, rhetorician, XIII. 355 LIBANUS, or Lebanon, XIII. 355. See Syria. LIBAU, Russian scaport, XIII, 355.

LIBRI, XIII. 355-law of, V. 472-in church courts, IX. 480 LIBELLULA, genus of insects, IX. 175, 176
—lives after decapitation, III. 177.

Liber, or inner bark, V. 82. LIBERIA, XIII. 359; II. 227, 709. LIBERIUS, bishop, XIII 360 Libertini, Roman, XIX. 317.

Liberty, political, XIII 260; Barbour's encomium on, IV. 435-natural, XIII. 261-civil, 1b -opposition of civil and political, 268-promoted by the Crusades, VII. 532; and by commerce, IX. 395 - economists on, VIII. 377-religious, not accorded in ancient Greece. XX. 381.

OF THE PRESS, XIII 360, 357—Hall's apology for, XI. 192—Flench laws relative to, X. 179, 180, 184.
Libss (M), on electricity produced by pressure, VIII 563

Libethenite, mineral, XV. 103

LIBOURNE, in France, XIII. 373; X. 632roof of the riding-house at, XIX. 394. Libra, XIII 373.

LIBRARIES, XIII 373 - history of, 380 - British, 389 - foreign, 406 - Ameri-can and Colonial, 428-statistical view of the principal libraries, 432, et seg .--Alexandrian, II. 469 — Ambrosian, in Milan, XIV. 95; XV. 3—in Berlin, IV. Milan, XIV. 95; XV. 3—in Berlin, IV. 667—Constantinople, XXI 383—Copenhagen, VII. 347—Dresden, VIII. 177—Dublin, 225—Edinburgh, 395, 399—Florence, IX. 666—Germany, X. 592—Gibralian, 620—Glasgow, 653—Italian, XII 661—Lambeth palace library, XIII. 669-Lisbon, 506-Liverpool, 521-London, 674-Madrid, 805-free libraries in Manchester and Salford, XIV 259— Modena, XV 296—Munich, 679—New York, XVI. 221, 230-Padua, XVII. 42 -Rome, XIX. 369-Santiago, VI 546 -free library at Sheffield, XX. 97-of the United States, XXI 424—at Vienna, 583—classification of books in, IV. 715 -Samuel Brown's itinerating libraries, XI. 176-libraries entitled to receive a copy of every published book, VII, 357.

Libration of the moon, I. 813, IV. 39discovered by Galileo, III. 801 — Lagrange on, I 813; III. 811; XIII. 152,

Labri (M.), on the effect of electricity on odoriferous bodies, VIII 599.

odoriferous bodies, VIII. 528. LIBURN and Liburnia, XIII. 435. LIBYA, or Libia, XIII. 445, 743; II. 211— invaded by Agathocles, VI. 285—Lybian war, VI. 290—coins of, XVI. 380.

Libytha, genus of maccis, IX. 208.

Lace, IX. 261—bird-lice, 262—whale-lice,
VII. 542—wood-lice, 543—destruction
of, XXI 549—on the domestic animals,

LICENSE, of Excise, XIII. 435—heense duties for different modes of fishing in

#### LIC-LIF

Licenser of books, VI. 370; IV 722 Licetus (Prof ), on the moon's light, IV. 41. - his work De Monstris, XIV. 423 Lachenes or Lichens, nat, order of plants V. 217-reproductive organs of, V 146 -used in dyeing, VIIL 273, 285; XIII 515 - orchilla weed, XVI. 700 - reindeers, XIII. 235 Lichenin, V. 72.

LICHFIELD, XIII 436-cathedral, XX 531. (Lord), on the penny postage system, XVIII. 411

Lichia, genus of fishes, XII. 297-fossil,

LICHTENBERG (G C), XIII. 436 German principality, XIII 436. Lichtenberg's electrical figures, VIII. 606 Lichtenberger (Prof), on the origin of printing, IV 707.

Lichtenstein (A. A. H.), his work on the

genus mantis, IX. 11—on the giraffe, XIV. 209.

Lacinian law XIX, 303.

Licinianus (Caius Granus), discovery of his annals, XVII. 215. LICINIUS, Emperor, XIX. 352.

- (Stolo) XIII. 436. Licinus, genus of insects, IX. 148. Licosa, headland, XX. 241 LICTOR, XIII. 436; IX. 486

Liddel, river, VII. 576; XIX. 453, 790 Liddell and Scott (Messrs), their lexicon,

(Dr), on the History of Rome, Lidner, Swedish author, XIX. 699.

Lie, does necessity justify a? XV. 572. Lieber (Thomas). See Erastus. Lieberkuhn on the villi of the ileum, III.

60, 61-his solar microscope, XIV Liebig, on agricultural chemistry, II 374 -on the fermentation of Bayarian beer, V. 335, 336-on the ingredients of the soil necessary for the growth of plants, 172 - on the potato disease, ib. - his chemical school at Giessen, X. 621—on animal heat, XVII. 665—his mode of silvering glass specula, XXI. 132.

LIECHTENSTEIN, German state, XIII. 436. Linge, province in Belgium, XIII. 436; IV 613, 615,

- town, XIII. 436-taken by Marlborough in 1702, V. 447-university of, IV. 620; XXL 492—hbrary of, IV. 623; XIII. 423—manufactory of fire-arms at.

LIEGNITZ, in Silesia, XIII. 437, XX. 275. Lier (C.), his work on the insects of France, IX. 15.

LIERRE, or Lier, town in Belgium, XIII. 437-normal and mulitary schools at, TV. 621, 622,

Liesganig, his measures of a meridional degree, IX. 550

Lieutaud (Joseph), anatomist, II. 765.
LIBUTENANT, XIII. 437; III. 665—naval,
XVI. 104—prices of commission, rates
of pay, &c., VII. 202, 203.

Lièvrite, mineral, XV. 90
Life, II. 747—tenacity of, among insects
and other animals, III. 176—instances of supposed confusion of animal and vegetable life in animalcules, 200, 204, \* 206, n. 2-length of, in the antediluvians, 267; in modern times, XIV. 425, see Longevity-Aristotle on, III. 548expectation of, XV. 647; XVIII. 351, 353, 355—doctrine of, XVII. 648—pro perties of living beings, 655—physical and vital phenomena, ib. — average duration of lives, XVIII. 588, 589 human life compared to a river. XIX 179-agents influencing, 607-life seemingly restored by galvanism, XXI. 684.

LIFE-GUARDS, XIII. 487; III. 665, XI. 74, VII. 202.

LIFE-PRESERVERS, XIII. 487. Life-rafts, XIII. 439.

## LIF-LIL

Ireland, IX. 623, n—license duties as a tax, XXI. 69 (and on, XII. 624, 230; XII. 334—tables, 415, 416—offices, 404—in London, XIII. 665. See Annuties, Insurance.

Liffey, river, VIII. 215; XII. 505; XIII.

Lifford, in Donegal, VIII. 103. Lifting pump, XII 177

Ligaments, structure and properties of, II 823; XVII. 652—yellow or elastic, II. 824, III. 5-in bivalve shells, XV. 342

Ligan, IX. 668.

Ligature, XX. 822 et seq.

LIGHT, XIII 449; XVI 531 et seq -Aristotle's definition of, L 621—undulatory theory of, 801, 895, 896, 903, 909, progress of, since Fresnel, 917-interference of light, 897 (see Interference)-Fresnel's discoveries regarding, 809; X. 306, 307-1 etardation of, in dense media, I 910-theory of dispersion of, 920-nondispersion in free space, 921-chemical action of, 1b—aberration of, II 35, III. 804; IV 21—its effects upon plants, V. 220-zodiacal, IV. 13-of the moon, 41; discovery of heat in, XIV. 485nature of, VI. 657-amount of solar light received by the earth, 775, 776colours of deflected and diffracted light, 650, 651-electrical, VIII 546, 547, 548 -its influence on health, XIX. 608alternately attracted and repelled by bodies, XX. 752—produced by voltaic electricity, XXI 626, 637—instantaneous light apparatus, 630—white light, XI 272—light and shade in drawing, VIII 173. See Aurora Borealis, Chiomatics, Colour, Optics, Phosphorescence, Polarisation, &c. Lightfoot (John), English theologian,

XIII. 482.

LIGHTHOUSES, XIII. 463 - principles of optics applied to the improvement of, I. 753—Fresnel's system of illuminating 906, X. 307-introduced into Scotland, I 907-on the Isle of May, XIV. 367-Eddystone, III. 491; XX. 335—in the Firth of Forth, IX. 795—of Cantyle,

XIII 95—at Corunna, X. 372—in the Mauritius, XIV 363—R. Stevenson's improvements in, XX. 695—on the Chapman sands, 723

aghtning, XIV 662—identical with electracity, I 735; VI 345; VIII 527, 582

—rapidity of, II. 107—Stephen Gray on,
VIII. 526—transport of ponderable substances by, 584—sheet or summet light-ning, 587, XIV. 683—effects produced by, VIII 585—on compass needles, on animal bodies, 601—death from, XIV 431-its destructive effects, 662meteorolites not produced by, 633 ductors of, VIII. 609-for ships, 610,

XX. 24—imitation of, XVIII. 706. Ligne (Prince de), his Life of Prince

Eugene, IX. 367, n.
Lignin, V. 72.
Lignite, XV. 123, 149; XVII. 641—of
Armagh, III 614—Prussia, XVIII 668 Armagh, 111 614—Prussia, XVIII 668 Lignum-vite, XXI 278—specific gravity of, XII. 89—in Honduras, XI. 612—uso of, for the bearings of the screw-shaft in steam-vessels, XX 655. Ligny, battle of, V. 619; XVIII. 657. Licole, in Slam, XIII. 488.

Ligula, genus of entozoa, XXI. 979. Ligule, in botany, V. 92 Liguria, in Italy, XIII 483 LIMFIORD, in Jutland, XIII, 483 Lilac, flowering shrub, XVII. 764. Lilac-colour, dyeing of, VIII. 311, 319. LILBURNE (John), XIII. 483.

Lihaceze, nat. order of plants, V. 212 Lilius (Aloysius), reform of the calendar by, VI. 82, 83.

LILLE, or Lisle, XIII. 483—defence of, by Boufflers, V. 242; IX. 369—slege of, X. 70-population, 277. - lace, XIII, 142,

LILLEBONNE, town in France, XIII. 484. Lillo (George), XIII. 484 — dramatic works of, VIII. 164, 165; XVIII. 96.

## LIL-LIM

LILLY (John), poet, XIII 484; XXI 166 — (William), astrologer, XIII. 484— his account of Brigg's visit to Baron Napier, XV 777

LILYBEUM, XIII 485, XX. 245—besieged by the Romans, VI 290.

LILYE, or Lily (William), grammarian, XIII 485.

LIMA, XIII. 485; XVII 465, 474—temperature of, II 673—Bolivar's expedition to, IV. 818

genus of mollusks, XV. 348, 347fossil, XVII 106

Limacidæ, family of mollusks, XV 374

Limacina, genus of mollusks, XV 361. Limacodes, genus of insects, IX. 214 Limamuræna, genus of fishes, XII 231 Lamanobia, fossil mollusks, XVII 105 Limapontia, genus of mollusks, XV 370 Limax, genus of mollusks, XV 374 Limbelite, mineral, XV 89

Limber-strake of a ship, XX. 187. Limbs, power of throwing off and restor-

ing, in the crustacea, VII 538 LIMBORCH (Philip Van), XIII. 486-on theology, XXL 204 et seq. LIMBURG, XIII 486.

Limburg-Brouwer, on ancient mysteries,

XV. 754.

LIME, XIII 487, XV. 65-its use as a manure, II 302, 414—Dr Black on the causticity of, IV. 738—crystallised and stalactific carbonates of, VI 68—chemical properties of, 487—its use as mortar, V. 731, XX 718—in purifying gas, X. 416-in the manufacture of sugar, XX. 792, 797 - sulphate and phosphate of, as manures, II. 304, 415 —in plants, 388; V. 97—its beneficial effects against "fingers and tocs," II 319—phosphorescent effects of electricity on calcareous substances, VIII 599-its poisonous property, XIV. 434-carbonate of, VI 472, 487. See Iceland spar, Limestone, Marble.

LIMERICK, Irish county, XIII 487—agri-cultural statistics, XII. 515, 517—golden vale of, X. 388.

443

lace, XIII 142 Limestone, II 391, XV 92, 146—different kinds of, 147, 148-fresh-water, 144, 147 —joints in, 164—specific gravity of, XII 88—marine, XV.143—altered or crystalhine, 153—carboniferous, 202, 203—hippurite limestone, XIII 508; XVII 107—of Derbyshire, VII. 755—Devonshire, 763—Edinburghshire, VIII 409—as building-stone, XX. 712—formations of, hable to be hollowed into caverns, XVII. 601-mortar made from, XX. 713-kinds composed of fossil foraminifera, XXI 1007. See the Geological Section of different countries.

Lime-tree, V. 113, 185, XVII. 759, 761— its use in joinery, XII. 817—as a timber-

tree, XXI 278.

— fruit, V 186; XI 729.

— juice, XIII 381.

Limigantes, VII 306, 307. LIMITED LIABILITY, XIII 489; XII. 819 Limitrophic organs, III. 3, 59 Limnanthaceæ, nat. order of plants, V. 188. Limnea, genus of mollusks, XV. 374-fossil, XVII. 111

Limnebius, genus of insects, IX. 117. Limnebius, family of mollusks, XV. 374. Limnephilus, files used as batt, III 149. Limnobia, genus of insects, IX. 226. Limnochaies, genus of arachnides, III. 389.

Limnorla terebrans, XI. 224; VII. 542. Limoges, town in France, XIII. 489-

population, X. 277. Limon Bay, XVI. 121. Limonite, mineral, XV. 108. Limopis, genus of mollusks, XV. 849-fossil, XVII. 106.

# LIM-LIN

Limosa, genus of birds, XVI 803 Limousin, in France, XIII 489, X. 277. Limoux, town in France, XIII 489 Limpet, XV 379—key-hole limpet, 380bonnet and slipper limpets, ib.

Limpopo, African river, II. 214. Linaceæ, nat. order of plants, V. 187.
Linaceæ (Thomas), physician, XIII 489—
founder of the College of Physicians of London, XIV 459, 460

Linant (M), on the volume of water in the Nile, VIII 426—on lake Mccris,

Linari (Prof ), on thermo-electricity, XXI. 653

Linaria, genus of birds, XVI. 761 LINARES, town in Spain, XIII. 490. Linarite, mineral, XV. 105 Lincei, academy of, II. 63

Linckius on marine worms, XXI 991. n 2

Lincoln, XIII 490—cathedral of, III. 482, 516; XX. 733

College, Oxford, XXI. 459. Lincoln's Inn, XII. 384; XIII 672—library of. 394.

LINCOLNSHIRE, XIII. 490-sheep, II 345improvement in its agriculture, VII 891—canals, XVI 54—duck-catching in, 818-embankments in, VIII 643, 647population and value of property, 754

Lind (Dr James), his anemometer, XVIII. 65.

\_\_\_\_\_ (Jenny), songs written for, by Mendelssohn, XIV. 496. LINDAU, in Bavaria, XIII. 493 Lande (S. Gottheb), his Polish lexicon,

XVII. 529

Linden, order of plants, V. 185 Lindenau's astronomical publications, III. 813, 814

Lindisfarne, XI. 593; XVI 299 Lindley (Dr), his classification of plants, V 179—on the propagation of plants, XI 693—on horticulture, 698 et seq - (George), on horticulture, XI 708,

713, 715, Lindo, XIII 494.

Lindsay (Sir A Bethune), XVII. 422 midsay (Sir A bettune), AVI. 422

— (Sin David), XIII 493, VI 191

—Chalmers's edition of, VI 402—his satire of the Three Estates, VIII 144.

— of Priscottie, his account of the escape of James V., XIX. 770.

- (Dr), on the character of Wakefield, XXI 682.

(W. Lauder), on the dycing pro-perties of lichens, VIII 286

LINDSEY (Rev. Theophilus), XIII 493. Lindus, town in Rhodes, XIII 494. Line, in geometry, X 506, 507—straight

line, 507, 551, properties of, 556—lines in fortification, IX 809—in heraldry, XI. 325—lines of the spectrum, I. 915—of operation in war, XXI 704—line of battle, 720.

- arrangement of volcanoes, XXI.

Linear engraving, VIII 805. LINEN, XIII. 494—bleaching of, IV. 768 its loss of weight in bleaching, 769calendering of, VI. 92—dyes worse than silk and wool, VIII 274—method of dyeing it red, 292; yellow, 299; blue, 303; black, 306; green, 310; violet, 312; orange, 313, mixtures of black, 525, thange, 525, indicates of mack.

6c, 314—imports and exports of, 734.

736—exports, 730—ink for markmg, XII 384—means of removing inkspots from, XIII. 331—its use in papermaking, XVII. 251, 252.

Linen-manufacture, XIII. 495—of Antrim, III. 268; Armagh, 614; Dundee, VIII. 258; Dunfermline, 259; England, 729; 208; Duniermine, 209; England, 259; Fffe, IX. 545, France, X. 258; Gormany, 590, Donogal, VIII. 106—Ireland, XII. 519—Coleraine, VIII. 109—Forfar, IX. 784—Holland, XI. 583—Kirkcaidy, XIII. 98—Paisley, XVII. 89—Scotland, XIX. 805—Sligo, XX. 831—Thyperary, XXI. 287—Tyrone, 408—Wintemberg. 283.

-Wurtemberg, 938. Ling, as food, IX. 764.

# LIN-LIP

Ling, fisheries of, in Britain, IX 648—in Iteland, 634—Scotland, XIX 804 - (H. P.), Swedish poet, XIX 700 Linga, one of the Shetland islands, XX.

Lingam, V 267 LINGARD (Rev John, D.D.), XIII 496-on the character of Cromwell, V 418-on the Restoration, 420 — on the great plague in London, 424—on an incident in King Edgar's history, VIII 660, n—on the massacre of St Bartholomew, X 33. n -on the influence of Wycliff's biblical labours, XXI 946.

LINGEN, island, XIII 496 Lingual bone, in man, III 26 Lingula, genus of mollusks, XV. 339, 337 -fossil XVII 105.

- flags, XV. 196; XVII 105 Lingulidæ, family of mollusks, XV 339 Link motion, XIV. 401 LINKOPING, in Sweden, XIII 496. LINKOPINGS LAN, XIII. 496 Links' experiments on capillarity, XII 101.

Linkwork, in mechanics, XIV 398, 400 LINLITHGOW, XIII 496

LINLITHGOWSHIRE, XIII 497-agricultural statistics, XIX. 796, 797, 798—population, 799—corn-measures of, XXI. 809 Linnæan Society of London, XIX. 368-founded by Sir J. E. Smith, XX. 346

LINEAUS (Sn Challes), XIII 488—his classification of animals, III 182, 184, of plants, V. 177; of the mammalia, XIV 126; of birds, XVI 726-his definition of the three kingdoms of nature, III. 169—his entomological system, IX 4-on ants, III 261; the crustacea, VII. 540, fishes, XII. 205—on the sexes of plants, V 152—on the colours of plants, VII 158—his Systema Naturæ, XIV. 126 and n 1—his museum purchased by Sir J E Smith, XX. 346 the manufacture of sal-ammoniac, II 721-on zoophytes, XXI. 978 et seq.his description of himself, XIV 126.

Linneite, mineral, XV. 116. Linnets, XVL 761.

Linnets (Loch), XIII. 501; XIX. 795 Linois (Admiral), V. 598, 601. Linseed oil, XVI. 494

LINT, XIII. 501. See Hemp, Linen, Weaving Linth, Swiss river, XX 888

Linton Bridge, on North British Railway, XVIII. 762, 763.

LIN-TSING, town in China, XIII. 501 LINUS, XIII. 501. (Father), his opposition to Pascal,

TV 451 Linyphia, genus of arachnides. III. 380

Linz, or Lintz, Austrian city, XIII 501. Lion, XIV. 169, XVII 632-of Africa II 217-in Persia, XVII 423-of Asia, III. 739—Hindustan, XI 455 and n 2—dentition of, XVI 459, 460—chemical composition of the teeth of, 418-less

courageous than the dog, XX 219—lion-shooting, 211—fossil, XVI 172—m heraldry, XI 332

Lion-ant, IX. 178 Lioncels, in heraldry, XI 332. Liorhynchus, genus of entozoa, XXI. 980. Lipara, genus of insects, IX. 254. LIPARI ISLANDS, XIII. 502, XX 246. Liparis, genus of fishes, XII 307. Liparites, VII. 314.

Liparus, genus of insects, IX. 139. Lipenius, biographical dictionaries of, IV. 714

LIPETSK, Russian town, XIII 502. LIPPA, Hungarian town, XIII, 502, LIPPE-DETMOLD, German principality, XIIL 502.

LIPPE-SCHAUMBURG, XIII. 503. Lippersheim (John), the alleged inventor of the telescope, XVI. 527; XXI. 133. LIPPI (Filippo), painter, XIIL 508.

(FRA FILIPPO), painter, XIII. 508. (LORENZO), painter, XIII. 504. (Prof.), of Florence, on the lym-

phatics, IL 804.

## LIP-LIT

LIPPSTADT, Prussian town, XIII 504. Lips, muscles of the, III 39-anatomy of

Lipsius (Justus), XIII 504, VL 738-crosses, VII 518 LIQUATION, or eliquation, XIII 504.

Liquefaction, XI 269 Liqueurs, IX. 760 Liquid manures, II. 294

- measures, XXI 808 Liquidambar, order of plants, V 207 ——————— tree, XVII 765

Liquids, weight of, XIV. 417. See Fluids Liquor sanguinis, XVII. 664—exudation of, 690

LIQUORICE, XIII 505; V. 190 Liri, river See Garighano LIRIA, town in Spain, XIII 505. Liroconite, mineral, XV 103.

Lisbon, XIII 505—geographical academy of, II 62—royal academy of, 67—earthquake at, X. 695; XVII 582, XVIII 386; XX. 94—manufactures, XVIII 398-wine, 397; XXI 885, 889, 890-French expedition to, in 1831, X.

205—newspapers, XVI 203 Lisburn, Irish town, XIII 508 Lisdownvarna, in Clare, chaly beate spring

of, VI 753 LISIEUX, in Flance, XIII 508 LISKEARD, in Cornwall, XIII 508-group

of rocks, XV 199. LISLE (Joseph Nicholas de), XIII, 508

See Lille LISMORE, Irish town, XIII. 509-salmon

fishery of, IX. 625. - ısland, XIII. 509

Lispe, genus of insects, IX 250. Lissa, Prussian town, XIII 509. ısland, XIII 509.

- genus of insects, IX. 252 Lissonotus, genus of insects, IX 144 Lister (T Henry), novelist, XIII 509

- (J Jackson), his improvements of the microscope, II. 768; XIV 778 (Martin), his work on insects and arachnides, IX. 3—on the habits of spiders, III 376.

Liston (Rev Henry), his organ, XVI. 713.

(Mr), on surgery and surgical instruments, XX. 820 et seq LISTOWEL, Irish town, XIII 509

Literary property; see Copylight—chronology, VI. 698—diseases of literary men, XIV. 442

- history, in its relation to philology, XVII 526.

Laterature, an element in history, XI 538 of Edinburgh, VIII 403-Egypt, 447; XI 426—London, XIII. 673—Germany, X. 593, 693—of the Hindus, XI 477 illustrated by numismatics, XVI 352of Holland, XI 590-Hungary, XII. 18 -Italy, 660-China, VI. 576-organisa-tion of, XIX. 107-data for theories of, 110-Russian, XIX. 546-Scandinavian, 689-of the United States, XXI. 424

Litharge, VI 497 Lithagow (William), traveller, XIII. 509 Lithia, XV. 65—in tourmaline, 89. Lithia-mica, XV 78.

Lithium, VI. 486 Lithobius, genus of myrapods, XV 749 Lithocardium, genus of mollusks, XV. 349

-fossil, XVII. 107. Lithodendron, fossil corals, XVII 97. Lithodomus, genus of mollusks, XV. 348. Lithographic stone, XV. 92—printing,

XVIII. 520. LITHOGRAPHY, XIII. 510 - chromo-htho

graphy, XIV 734, XIII. 513. Lithology, XV. 129. Lithomarge, mmeral, XV. 84.

Lithophylliaces, polypes, XXI. 1005. Lithophytes, XXI. 974, 1009 Lithornis, genus of fossil birds, XVII.

Lithosia, genus of insects, IX. 214. Lithostrotion, fossil corals, XVII. 97. Lithotomy, II. 766—ancient, XX. 811, 814 -modern, 817, 818, 820-operation of, 880; on the horse, XXI. 570.

#### LIT-LIZ

Lathotrity, XX. 830, 831-practised in ancient times, 811.

Lithoxylon, mineral, XV. 69 LITHUANIA, XIII 514-language of, 215; IX. 392

Lithurgus, genus of insects, IX 199. Litke (Admual), his survey of the coast of Russian Lapland, XIII 242, 243. Litorina, genus of mollusks, XV 382 Litorinidæ, family of mollusks, XV. 382-fossil, XVII. 110.

LITMUS, XIII 515 Latre, French liquid measure, X. 284. Lattil (Clement), XIII 402 Little Go, examination at Cambridge, XXI. 464

Rock, town in Arkansas, XIII 515 (Mr), on the produce of the Irish salmon fisheries, IX. 624.

- (W) entomologist, IX 18. LITTLETON (Sir Thomas), XIII 515. Littrow (Prof), on telescopes, XXI 121,

Lituites, fossil mollusks, XVII 112 Lituola, fossil foraminifera, XVII 93, 94 LITURGY, XIII, 515 - Cophtic liturgies,

Lave stock, II. 337-treatment of, under disease, 357—improvement of, by Bakewell, 263; IV 377, XIII. 350—management of, II 325, 340 et seq Cattle, Sheep, Pigs, &c.

Liver, III 62-worms in the, 175; XXI. 974 — excretion from, XVII 665—in the crustacea, VII 539—its diseases in the domestic animals, XXI 569

LIVERPOOL, XIII 517—and Manchester Railway, I 885, XVIII 753, XIII 179; XX. 682—benefits conferred on, by steam and railway conveyance, 457-Dr Curiie's residence in, 594-W Brown's munificent gift to, XIII. 406—free library of, 405—docks of, VIII 74 -police statistics of, XVIII 198-postoffice statistics, 416—roof over the rail-way station at, XIX. 398, steam-engmes

in New Brunswick, XIII. 522. in Nova Scotia, XIII 522. - (C. Jenkinson,), first earl of, XIII.

(R B. JENKINSON), second earl of XIII. 523, XVII 363—a member of the ministry in 1806, V. 601—prime minister, 612—bill of pains and penalties against the queen presented by, 629-his commercial policy, ib, 637-629—his commercial policy, 10, 637—struck with apoplexy, 648—on seignorage of coining, VII. 75—his work on coins, XV 429, quotation from, 486
Liverwort, order of plants, V. 217, 145.

See Hepaticæ

Livery, XIII. 524

Liverymen of London, XIII 677, 526. Livia, XIX 334—genus of insects, IX 171. Livings in the English Church, VIII. 743. See Benefice

Livingstone (Dr), his travels in Africa, II. 211—on the effects of missions on the natives of Africa, XV. 273—his notice of Tete, 670—discovery of Lake Ngami, X. 477; XVI 240—on the Zambesı and its falls, XVII. 601, 608; XXI. 967.

XXI. 967.
LIVIUS (Andronicus), comic poet, XIII
527; VIII. 141—poetry of, XVIII. 104
— (TITUS), XIII 526—his Roman history, XVII 258, XVII. 210—his character as a historian, VI 738—on the embassy to consult the laws of Athens, the consultation of ib -alleged provincialisms in his style, XVII. 336.

LIVONIA, XIII 527, XIX 521—interest of money in, XII. 429—language of, XIII 201, 215.

LIVORNO, or Leghorn, XIII. 528, 316. LIVRE (French), XV. 434—its degradation, and average value at different periods, íb.

LIXURI, in Cephalonia, XIII. 528; XII. 453 Lixus, genus of insects, IX. 140. Liza, a fish of Venezuela, XXL 536.

#### LIZ-LOC

LIZARD POINT, XIII 528; VIL 406 Lizard's tail order of plants, V 207.
Lizards, reptiles XIX. 27—their bones, III 86 et seq -teeth, XVL 433; eyes XVIL 450.

Llama, XIV 205; VIII 387, II. 605; IV. 823, XVII 473, 632.

LLANDOVERY, Welsh town, XIII. 528—rocks of, XV. 196, 198.
LLANELLY, XIII 528; VI. 52, 53
LLANFILLIN, town in Wales, XIII 529 LLANGEFNI, town in Wales, XIII 529 LLANGOLIEN, XIII 529-vale of, VII 735

-aqueduct at, III. 338 LLANIDLOES, Welsh town, XIII. 529; XV 518.

Llanos of South America, II 668 - of Haytı, XI 254—of Colombia, VII. 133—of Venezuela, XVI 717; XXI 536 of the Oronoco, XVII. 609; X. 795.

LLANDWST, Welsh town, XIII 529 LLANDRISAINT, Welsh town, XIII 529 Lleiena, town in Spain, XIII 529.

Llewellyn (M1), his oxymel photographic process, XVII. 549. LLORENTE (Don J Antonio), Spanish his-

toman, XIII. 529-on the Inquisition ın Spain, XII 390, 391.

LLOUGHOR, Welsh town, XIII 530. Lloyd (L), on bear-shooting, XX 211 on the capercalizie, 236-on retreats in war, XXI 718.

—— (Prof. of Dublin), on the theory of light, I. 918—other works of, 1b., 919—his magnetic instrument, 994—his exertions promoting magnetical expeditions, 995 —on the moon's influence on the mag-netic needle, XIV. 19—on the variation of the needle, 53, 57-his method of observing the dip, &c, 86—his theodo-lite magnetometer, ib. —his inclination instrument, 87 - on optics, XVI. 546, 548, 549, 599 et seq

(WILLIAM), bishop, XIII 530 LLOYD'S ROOMS, Royal Exchange, London, XIII 580—Glasgow, X. 654. —— Register of British and Foreign

Shipping, XIII 531, XX. 166-effects of, in ship-building, 204, 205—classification of timbers at, XXI. 277

Lo (St), French town, XIII 531. Loach, angling for, III 162. Load of timber, XXI 280. Loadstone, or magnet, XIV 1, 19-specific

gravity of, XII 88-armature of, 20statue of Venus composed of, XIX. 844. Loam, XV. 83, 142 Loanda, island, XIII, 531

- (ST PAUL DE), African city, XIII.

LOANGO, XIII 531; II. 227. Lossaceæ, nat. order of plants, V. 192. Lobatto (M.), on the mortality in Amsterdam, XV. 644.

Lobeau, island in the Danube, XXI. 586. Lobeira (Vasco de), XIX. 265 Lobeliacese, nat. order of plants, V. 189. Lobres, genus of bilds, XVI 805. Lobo (Jerome), Jesuit, XIII. 531 Lobocheilos, genus of fishes, XII. 257. Lobos, or Seal Islands, XIII. 531.

Lobotes, genus of fishes, XII. 278
Lobster, VII 541—cuculating system of,
XV 356—fishery of, on the coasts of
Ireland, IX. 634—as food, 765. Locality, faculty of, XVII. 563

LOCARNO, Swiss town, XIII. 532; XX 882.

lake of, XIII. 151. See Lago Maggiore.

LOCATELLI (Pietro), violinist, XIII. 582. LOCATIO ET CONDUCTIO, XIII. 532. Lochaber, XII 438. Locheia, seaport on the Red Sea, XVIII.

LOCHGILPHEAD, XIII. 532, III. 527. Lochleven, XIII. 94—trout of, ib.—Queen Mary in the castle of, XIX. 786. LOCHMABEN, XIII. 532; VIII. 238.

LOCHWINNOCH, XIII 532. Lochy, river, XII. 489.

## LOC-LOC

Lochy (Loch), XIX. 794

Lock, XIII. 532—Bramah's, V. 273.

— (MATTHEW), XIII. 532.

— of canals, XVI 54, 56; XIX. 222of the Caledoman Canal, 55.

— of guns, XI. 98.

—— of guns, XI. 98. Lock-jaw, in animals, XXI. 576. Locke (John), XIII. 547—his division of the objects of knowledge, I. 8, 9-on trade as an object of liberal study, 49on the distinction between mind and matter, 57-on primary and secondary qualities, 62-on the varieties of mind, 76, n. 1-Walburton's opinion of his philosophy, 80, n 2—his Essay on Human Understanding, 100, 102 et seq biographical sketch of, 100, 101-his diligent study of metaphysical writings, 103 — his style, 104 — reception of his Essay, ib, 105, 106, 250, 251—its influence on Crousaz, 106 and n 4-diffusion of his principles in France, 108, 250his constant appeals to reason, and sincerity of his inquiries after truth, the best antidote to the errors of some of his conclusions, 108—misapprehension of his doctrines, 109 et seq —on ideas from sensation and reflection, 110, 112, XIV. 563, n. 1-his use of the word reflection, I. 111, n. 253; XIV 562 577-represents sensation and reflection as distanct sources of knowledge, I. 113-misapprehensions relating to his doctrine on the power of moral perception, and the immutability of moral distinctions, 115-his disavowal of the conclusions sometimes drawn from his reasonings, 117-Lord Shaftesbury's attack on, 118 -his tracts on Education and the Conduct of the Understanding, 118, 119, 121 his letter to Newton, 119, n-defects of his intellectual character, 120, 121his modesty, 122, n -on the intercourse between mind and matter, 125, n. chief opponents in England, 253-his philosophy contrasted with the speculation of Leibnitz, 126-injustice done to him by Leibnitz, 255-on the scale of beings, 136, n.—on free-will, 143, n—letter of his to Collins, 263—influence of his writings on education, 269-on the perception of colour and figure, 166, on reason in matters of religion, 516, n 1—on mnate ideas, 109 et seq.; XIV. 601—on the silver comage, VII. 79, 379-his common-place book, 204-Condillac's adoption of his doctrines, 234—on the power of truth, XIII. 368—on supplies of iron, XIV 276—on insamty, 526-on trifling propositions, 593 — on metaphysics, 552 et seq. — Mill's views on mental phenomena compared with his, XV 12-a reformer in education, 809—on diversity of opinion as to what constitutes right and wrong, 541on genera and species, XVI. 736—his tracts on Money, XVIII 218—on the source of wealth, 225—on the incidence of taxes, XXI. 40-his definition of wit, 894.

(Dr), his thermo-scopic galvanometer, XXI. 654.

(Youmb)

795. (Joseph), on railways, XVIII 794,

Locke's History of Navigation, extract from, XX. 118.

LOCKERBY, XIII. 549; VIII. 238—fair at, IX 468.

LOCKHART (John Gibson), XIII. 548—his Life of Burns, VI. 20—his novels, XIX. 282—on Sir Walter Scott, 820, 821.

of Carnwath on the character of Fletcher of Saltoun, IX. 661.

LOCKPORT, town in United States of America, XIII. 549.

Locle (Le), Swiss village, XIII. 549. Locomotion, organs of, III. 3, 4, 37. See

Locomotive engines, I 881, 882; XVIII.
779; XX. 614—improvements in, by G.
Stephenson, I 883—adapted by him to
rallways, 884—competition of, in 1829, at
Rainhill, 885—theory of, 886—speed ot,

## LOC-LOL

885; XVIII. 793—expense of, 791—mileage run by, 784—stations for, 774 et seq—prevention of smoke in, XX 358—application of valve-gear to, 584 See Stephenson (George and Robert).

Locomotive faculty, XIV 568.

Local, ancient town, XIII. 549—Grecia tribes, ib 550.

Lockis, XIII, 549—coins of, XVL 370. Localaments (locali), in botany, V. 131. Locapletes, III. 776

Locust, IX. 159; XVII 687—locusts in Abyssinia, II. 55—Africa, 218—Arabia, III. 347—Asia, 741—the Canaries, VI 163—India, XI. 457—Egypt, VIII. 433, XXI. 549—Syria, ib—people who feed on, II. 115—their tenacity of life, III. 176—sometimes found in England, XVII. 637.

Locusta, genus of insects, IX. 158. Locusta, m botany, V. 115 Lodes, in geology, XV. 177, 198, 219, 220.

See Veins, Mineral.
Lonéve, town in France, XIII. 550
Longe (Thomas), XIII. 550

LODGE (Thomas), XIII. 550
Lodging-houses, in London, XIII 664;
XIX. 604—Lodging-House Acts, ib
LODI, in Lombardy, XIII. 550—battle of,
X. 100. XV. 786.

Lodwic (Mons), his plan of a universal alphabet, VI 417.

Loeschman's patent organ, XVI 713. Loew (H), his works on insects, IX. 24 Lofoden Islands, XIII. 550—fishery of,

Log (ship's), XIII 551; XVI 4—log-line, XIII 551 patent, XX. 27—of engineer, in steam-yessels, 656

LOGAN (John) XIII. 551.

\_\_\_\_\_\_\_ stones, VIII. 187, VII. 764; XV.

Loganiaceæ, nat order of plants, V 199. Loganite, mineral, XV 80.

LOCARITHMS, XIII 552—in algebra, IL 552—effect of their invention on the progress of astronomy, III 801—invention of, L 563; XV 776—apphed to navigation, XVL 5—to trigonometry, XXI 338.

Logeman's artificial magnets, XIV 76. Loggan (David), engraver, XIII. 551 Logi, Caledonian tribe, VI. 74.

Logic, XIII. 567—of induction, I 803— Plato's logical method, XVII 789 necessary logical judgments, XIV. 597—medical, 464—character of the article on, in this work, XX. 496

Login (T.), on the transportation of detrital particles by running water, XVI.

Logastique, in war, XXI 702. Logogram, XX. 676, 678. Logaono, town in Spain, XIII 685—battle of, XX. 464

OI, AA. 464
Logwood, V. 190; VIII 287, 304; XI. 610—specific gravity of, XII. 89
Louria, scaport of Arabia, XIII 635.
Lohenstein, poetry of, XVIII. 118.

Lohuree, Indian town, XIX. 415.

Lons, vertebræ of the, III. 6—muscles of the, 38.

LOIR-ET-CHER, in France, XIII 635.

LOIRE, department of France, XIII 635—
Haute, ib—Inférieure, ib

(LA), river, XIII. 636; X. 240.

XVII 647. LOIRET, department of France, XIII. 636

Lois Weedon, system of wheat culture, II 308, 309.

Loja, Spanish town, XIII. 636.
Lok (Michael), northern voyages promoted by, XVIII. 166, 167.

LOKEREN, town in Belgium, XIII. 636. LOKMAN, XIII. 636; II. 187; IX. 461 Loligidæ, fossil, XVII. 114. Loligo, genns of mollieles, XV. 400.

Loligo, genus of mollusks, XV. 400, 395, 397—gladius of, 399.
Loligopsis, genus of mollusks, XV. 399.
Lolingite, XV. 115.

Lollolus, genus of mollusks, XV. 400. Lolland, or Laaland, island, XIII. 138

## LOL-LON

LOLLARDS (The), XIII. 637; VIII 687, 688; XVIII 828. Lolle (Peter), his Damish Proverbs, XIX.

692.
LOLLI (Antonio), violinist, XIII. 637
Lollin Hybers, XIX 741

Lollius Urbicus, XIX 741
Lollius Urbicus, XIX 741
Lolme (De), on political liberty, X 738
Lomas (Joseph), his silk machinery, XX
285.

Lombard (Augusta), work on bees by, IX.

LOMBARDS, XIII. 638, X. 578—their invasion of Italy, XII 641 et seq; X. 578; XX. 256—their wars with the Romans, VII. 313.

LOMBARDX, XIII. 643; IV 309—irrigation in, XII. 622—monarchy in, XV. 413—feudal laws of, IX. 523, 524—iron cown of, XII. 536—Chailemagne crowned king of, X. 8—climate, XII 638—shower of stones in, XIV 629—savings-banks, XIX. 674—silk produced in, XX. 278
Lombe (John), first silk-mill in Britain established by, VII 755; XX. 276.

established by, VII 755; XX. 276. LOMBOR, Island, XIII 657. Lombrinera, genus of annelides, XI. 299. Lomechusa, genus of insects, IX 104 LOMOND (Loch), XIII 657, VIII 235; XIX. 794; XX 702—its temperatine at

LOMSHA, IN Russian Poland, XIII, 658. Lonaro, in Lombardy, XIII, 658 Lonchæa, genus of insects, IX 252 Lonchidite, XV 115

Lonchoptera, genus of insects, IX. 244
Lonchurus, genus of fishes, XII. 284, 285.
LONDON, XIII 658—Royal Academy of
Arts, II. 67—academies of music, 68—
repaired by Alfred, 480—aichitecture of
St Paul's Cathedral, III 455, see Paul's

Whitehall, III. 454; of Sir C. Wren's edifices, up; of those of later architects, 455—architecture and roof of St Paul's Church, Covent Garden, 454; VI. 266—roof of St Marin's-in-the-Fields, ib.—Somerset House, III. 455—specumens of pointed architecture in, 480—architecture of public buildings, 483—architecture of public buildings, 483—architecture of public buildings, 483—architecture of public buildings, 485—architecture of public buildings, 485—architecture, 496—streets and street architecture,

497, 506-architecture of club-houses, 506

— Panopticon, 1b — sewerage of, 495, 497 and n.—drainage of, VIII 126—

parks, III 494-Astronomical Society

(St)-arms of, XL 328-architecture of

of, 815—bread, IV. 380, 381—Royal Exchange, XI. 59—Gresham College, 60—porter, V. 331—fermenting-house in Whitbread and Co's brewery, 338—bricks, 343 et seq.—Bridewell, 348—bridges, 354 et seq.—Bridewell, 348—bridges, 354 et seq.—Bridewell, 348—bridges, 354 et seq.—Bridewell, 348—bridges, 354 et seq.—Bridewell, 348—bridges, 341 et seq.—Bridewell, 348—bridges, XII. 583, 586; V. 361; centre for, VI. 379—Vauxhall Bridge, XII. 583, 586—Water-loo Bridge, V. 368—Old London Bridge, 354—piles of London Bridge, VIII.

213—construction of houses in, VII, 320, 331—great plague, V 423; XVII. 752; its effect on the religious devotions of the people, I 461—great fire, V. 424—anti-Catholic riots, 492—Rathhone Place water, VI. 351—Chartreuse of Charter-house, 428—Great Westminster clock, VII. 24—Royal Exchange clock.

19, 20—the term cockney, 52 — mint, 68
Doctors' Commons, 118—College of Physicians, ib.; XIV. 460; Surgeons, VII 114—Sion College, 115 — quantity of coal brought to, 44—cutlery of, 601—Deaf and Dumb Asylum, 686—proportion of deaf and dumb in, 687—docks, VIII. 74, 75—convent of the Blackfriars, 100—

XXI. 466, 470-University College, 470

Humane Society, 182, 183—roof of Drury Lane Theatre, VI. 265—duties on coal blought to, VII 45—port of, VIII. 721; V. 355—decrease of mortality in, 755— University and King's College, 745;

#### LON-LON

-charitable institutions, VIII. 748vessels registered at, 738-Great Exhibition of 1851, IX 453-fish markets, VIII 728; IX. 634, 645, 649 - gas works, X. 410—gazette, 443; XVI 182, 188, 189—Guy's Hospital, X. 163—inns of court, XII. 384 inns of chancery, 384—Foundling Hospital, IX. 845—fire insurance, XII 417—livery, XIII 526 libraries, 389 et seg-change in the variation of the needle at, XIV. 51, 54 -changes in the dip of the needle, 59 —cemeteries, 444—banking introduced, XV 453—clearing-house, ib —bills of mortality, 600-its municipal privileges, 682-newspapers of 1714 and 1733, XVI. 184; of 1760-1820, 185; of later date, 188, 189-length of pendulum at, XVII 884 - police, XVIII. 193, 194, 195penny post established, 405-post-office, 416, see Post-Office—eocene rocks of the London basin, XV 211, 212—London clay, 212, 213; XVIII. 439; XX. 836-King's Cross railway station, XVIII. 778-railways connected with, 786, 791 et seq. — prisons, 567, 568 — roof of the Italian Opera-house, XIX. 399, 400 bath and washing establishments, 603 —lodging-houses, 604 — sanitary measures adopted in, 605 et seq —over-clowded graveyards, 621—savings-banks, 667-list of societies in, XX 368; Statistical Society, 551-East London waterworks, pumping-engines at, 612, 614-effect of the sulphurous acid in the smoke on its principal buildings, 712theatres, VIII 165; XXI 169 et seq., 176-Thames tunnel, see that article London, in Canada West, XIII 680, VI.

— (New), in Connecticut, XIII. 680 Londonderry, XIII. 680—siege of, in 1689, V. 442; XII. 489—agricultural statistics, 516, 517—quays at, XVI 79.

(Major) on the cannibalism of the

Potowatomies, II 682

(Rogen), XIII 683.

\_\_\_\_ (St John), XIII 683. Long-boat, IV. 800.

Longchamps (Selys de), his works on msects, IX. 22.

Longevity, of the antediluvians, III. 267; probably caused, in earliest times, by the influence of the Tree of Life, I. 453, 451—its importance in regard to the invention of the useful arts, 453—instances of, in the Ionian Islands, XII. 444—from abstinence, II. 51—in the Papal States, XVII. 248.

LONGFORD, in Ireland, XIII. 688—agricultural statistics, XII. 515, 517
Long-horns, breed of cattle, II. 341.
Longicornes, family of insects, IX. 18.
LONGINUS (Dionysius Cassius), XIII. 684;

XVII 221.
Longipalpi section of insects, IX. 103
Longipennæ, family of birds, XVI 811.
Longirostres, tribe of birds, XVI 800.
Longitarsus, genus of insects, IX. 150.

LONGITUDE, XIII. 685; X. 480; XVI.7, 10—in astronomy, IV. 6, 12—method of reducing geocentric to heliocentric, 57—methods of finding it, 118, 119; X. 472; XVI. 28, 45, 46, 48—on globes, X. 486—table of length of degrees of, at different latitudes, 481—as given by Ptolemy, 467, 472—in connection with the trigonometrical survey, XXI. 386 See Chronometer.

LONGOBARDI, XIII. 690. See Lombards. LONGOBUCO, town of Naples, XIII. 690. LONGOMONTANUS (Christian), XIII. 690; XIX. 692—on astronomy, III. 799 on logarithms, XIII. 558.

Longrimer type, XXI 401, 403. Longrightedness, cause and remedy of,

## LON-LOS

LONGTOWN, in Cumberland, XIII. 690 Longueruana, II. 739. Longus, Greek sophist, XIII 691 Longwall method of working coal, VII.

Longwood, St Helena, meteorological ob-servations at, XIV. 686. Longwy, French town, XIII 691 Lons-Le-Saulnien, in France, XIII. 691. LOO-CHOO ISLANDS, XIII. 691-language, 217.

Loodanahs, XI. 466. Loodiana, town in Hindustan, XIII 691 Looe (East and West), villages in Cornwall, XIII 692. Looking-glass See Mirror.

Loom, XXI 783-draw-loom, 785loom, VI. 271, 272-Indian, VII 437 —power-loom, 450; first introduced into Glasgow, X. 650, struggle of hand-looms against, XXI 781—for tapestry, 20 - electro-magnetic loom, 789. See Power-Loom.

LOONGHEE, Burmese town, XIII 692. Loosestrife, order of plants, V. 191. Lopares, people of Russian Lapland, XIII 242, 243

Lopez, his piratical expedition to Cuba, VII 568

– de Vega, XIII. 692. See Vega Lophidæ, or Lophioids, family of fishes, XII. 310, 311

Lophiodon, fossil mammal, XVII 163. Lophioidei, family of fossil fishes, XIL

Lophius, genus of fishes, XII 311—fossil, 346—teeth of, XVI 421, 422, 425 Lophobianchiati, family of fossil fishes,

XII. 338, 351. Lophobranchu, or Lophobranchs, order of fishes, XII 314, 315 Lophopea, polypes, XXI 1002 Lophophorus, genus of birds, XVI 786. Lophosia, genus of insects, IX. 248

Lophorma, genus of birds, XVL 768. Lophotes, genus of fishes, XII 304.

genus of birds, XVI. 745. Lophyropa, genus of crustacea, VII 543 Lophyrus, genus of insects, IX. 183 \_\_\_\_ genus of reptiles, XIX. 32 Loranthacese, nat. order of plants, V. 195

LORADH, Roman officers, XIII 692 Lorga, Spanish town, XIII 692 LORCHA, Chinese vessel, XIII. 692. LORD, honorary title, XIII. 692 Auckland's group, IV. 268

of the Isles, XI. 279; XIX. 764iron ship so named, XX. 164. Lord's day, I 502 and n., 503, 504; XIX. 562. See Sunday.

prayeı, I 493 suppor, XXI. 219. Lord-heutenant of a county, VII 467 Lords (House of), XIII 692; VIII 768; X. 737; XVII. 289, 292-admission of

a baron into, IV. 469.

of the Articles, XVII 291. Lorente (Dr), on the vegetation of Peru, XVII. 471

Lorenzo Marques, on the Mozambique coast, XV 670.

Loret (Sieur), his metrical gazette, XVI. 196.

Lorero, in the Papal States, XIII. 692—Santa Casa at, VI. 306. Loretto, town in California, VI. 94. Lorica, Roman cuirass, XIII 693 Loricaria, genus of fishes, XII. 263 Loricera, genus of insects, IX. 94.

Loricula, fossils, XVII 101 LORIENT, French port, XIII. 693—ship-building at, XV. 577—population of, X

Lories, birds, XVI. 783. Loris, genus of mammalia, XIV. 145. Lorius, genus of birds, XVI, 783 Lorme (Philibert de), his method of constructing roofs, XIX. 394.

LORN, in Argyllshire, XIII. 698; III 526 LORRAINE, XIII 693; X. 277—origin of the name, 10—dukes of, XV. 778.

Loseby (Mr), his mercurial balance, VII.

## LOS-LOU

Losh (Mr), his double furnaces for prevention of smoke, XX. 354. Lossie, river, XV 576 Lossiemouth, VIII 632 LOSSINI, XIII. 696, XVII. 4 LOSTWITHIEL, town in Cornwall, XIII. 696 Lor, in France, XIII 696 LOT-ET-GARONNE, XIII 696. Lota, genus of fishes, XII. 270. Lothaire, X. 10 Lotharus, XII. 644 Lothian, XIII 696. See Haddington-shire, Edinburghshire, and Linlithgow-

shire Lotophaga, XIII. 697. LOTTERIES, XIII 696

LOTTI (Antonio), XIII 697. Lorus, plant, XIII 697, VIII 431 Loudon (J Claudius), XIII 697—on horticulture, XI 726, 728, 745, 746, 754
— Hill, battle of, V. 430, XIX. 755

LOUDUN, town in France, XIII. 698. LOUGHBOROUGH, in Leicesteishire, XIII.

698-population, 321.
(Lord), on divorce, VIII 70. LOUGHREA, in Ireland, XIII 698. Louhans, town in France, XIII 698 Louis, name of French kings, XIII. 698. le Debonnaire, X 10

the Gross, X 12-buildings in Paris

erected by, XVII. 277.

the Stammerer, X 11.

VII., reign of, X 13 — joins the second Crusade, VII. 525. - VIII , X. 13.

IX., reign of, X. 13—Crusades of, VII 526; VIII 483, XVII. 197. X., reign of, X. 15

XI., reign of, X. 25ferred by, on Philippe de Comines, VII 181-Paris in the reign of, XVII 278 Montesquieu on the history of, XV. 515 -his treatment of the Swiss, XX. 884 - XII, 1eign of, X. 29—his invasion of Italy, XII. 651—Machiavelli's missions to, XIII 777

XIII, leign of, X 34—duelling in the reign of, VIII 231—his improve-ment of Paris, XVII 278

XIV., reign of, X 34—his expedi-tions against Algiers, II 571—character of the court of, I 55—wars of, III 637, in the Netherlands, IV. 303; against the Dutch, V 426, XI 577; with Britain, V. 447 - his admiration of Bourdalone -his treatment of James IL, 437, 445-persecution of the Protestants in his reign, VIII. 125—duelling, 231—his army, X. 270—his improvements of Paris, XVII. 279—poetry in the age of, XVIII 116-police system of, 185sumptuary laws, 186—his navy, XX. 131—Siamese ambassadors sent to, 234 XV, reign of, X 34-Damien's attempted assassination of, VIL 641-

Paris in his reign, XVII. 279. - XVI., reign of, X. 37—execution, -general mourning for, 176—Paris improved by, XVIL 279.

— XVIII, X 97.
— XVIII, X 169—departure from Pans, 171—restoration, in 1815, 174—his death and character, 188, 189—his improvements of Paris, XVII, 279-and Talleyrand, XXI, 13, 14

(Dr), on medical jurisprudence, XIV. 423

 king of Hungary and Poland, XVIII. Philippe See Philippe, Louis.

French gold com, XV. 441. island. XIII 699.

Port, in the Mauritius, XIV. 363. (St, knights of), XIII. 111, 120

(St), town in Missouri, XIII 698; XV 280

Louisbourg, taken by the British, V. 463 Louislade Archipelago, IV. 252, 263 Louislana, XIII. 699; XXI 419, 439 debt of, 428-wines of, 888-its cession to France, V. 589-its transference by the Spaniards to Bonaparte, 593-code of, XIII. 272-rate of interest in, XII. 432.

## LOU-LUC

Louisville, in Kentucky, XIII. 701, 70. Louping-ill, in cattle and sheep, XXL 575. LOURDES, town in France, XIII. 701. Louse See Lice

LOUTH, Irish county, XIII 701—town, 702—agricultural statistics, XII 515-518 LOUVAIN, XIII 702 - university of, IV. 620, XXI 492—hbrary of, IV. 633. Louvel, assassin, X, 181

Louvet's romances, XIX 289 LOUVIERS, town in France, XIII 703 Louvie, XVII. 281, 417, III. 453—Pont du, XII 580

Lovat (Lord), crofter system encouraged by, XII 439

Love, an ingredient in the spirit of chi-valry, VL 605—interest imparted by it to the drama, VIII 138, 146, 154-an attribute of God, XXI. 191

Love-apple, XI 745. Love-feasts, IL 230 Love-hes-bleeding, plant, V. 203 Lovel (Viscount), his insurrection in Henry VII.'s reign, VIII. 695.

poet, VII 109.

LOVELACE (Richard), poet, XIII 703 Lovell, his report on the seasoning of gun-stocks, XX 169

Lovenbrugger (Nicholas), XX. 885 Lowe (Sir Hudson), his letters and journals, XV 796.

(James), his screw-propeller, XX.

a Scotch surgeon, XX. 818 Lowerte, mineral, XV 99. Lowell, in Massachusetts, XIII 703. Lower (Richard), XIII 704, IL 761, 762. CSir William), XVI 528.

Lowestoff, XIII. 704—action with the Dutch off, V. 422

Lowicz, town in Poland, XIII. 704 Lowlands of Scotland, XIX. 791, 792. Lowndes on the comage, VII 78, 79, 378 Lowry (Wilson), on engraving, VIII 810 LOWTH (Dr Robert), XIII 704--his opinion of the common English translation of Bible, I 18, n. 1—his opinion of Hooker's style, 39, n. 2—on Harris's Hermes, XI 233.

- (Dr William), XIII. 705. Lowther (Sir James), V. 497 Lowthers, mountains, XIII 174. Loxa, or Loja, town in Spain, XIII 705, 636.

in South America, XIII 705. Loxia, genus of birds, XVI. 761. Loxocera, genus of insects, IX 252. Loxoclase, mineral, XV. 70 Loxodon, genus of fishes, XII. 324. Loxonema, fossil mollusks, XVII. 109,

LOYOLA (Ignatus), XIII 705; XII 360, 750—his Spiritual Exercises, and letter on Obedience, 752, 753.

Loyosa, his visit to the Ladrone Islands, XVIII. 268.

Lozenge, in heraldry, XI 330. Lozens, in France, XIII. 705 Lubbock (Sir John), on annuities, III. 225—on the orbits of comets, VII. 169—on probability, XVIII 591—on the tades, I. 818—his astronomical labours,

LUBECK, German city, XIII. 705-its commerce, VII. 187; with Denmark, 739-one of the earliest members of the Hanseatic League, XI. 213, 214-coins of, XV 444 — weights and measures, XXI 812.

- principality of, XIII. 706; XVI. 504.

Luben, Prussian town, XIII. 248. LUBIENIETSKI (Stanislaus), XIII 706. LUBLIN, city of Poland, XIII 706 LUBNU, Russian town, XIII. 706. Luc (John André de), XIII 706-on baro-

metrical measurements, I. 780; IV. 464 -his disingenuous appropriation of the discovery of latent heat, 739-on Hanmibal's route across the Alps, VI. 293, n.
—on evaporation, IX. 408—his hygrometer, XII 186—his electric pile, XXI. 619-Watt's letter to, 776 and n.

# LUC-LUD

Lucan (Earl of), XIX. 505 Lucania, in Italy, XIII 707. Lucanides, family of insects, IX. 127. Lucanus (M Annæus), XIII 708—poetry of, XVIII 106—death of, XIX. 337— Burman's edition of his Pharsalia, V.

genus of insects, IX 128 Lucar (Cypnan), on gunnery, XI 104, 106, 114.

Lucas (Charles), XII 494

(H), his work on insects, IX 18 Paciolus, or De Burgo, on algebia, II. 484—on geometry, X. 504. (T M), his system for teaching the

blind to read, IV. 782, XVIII. 554. Lucayas, or Bahamas, IV. 365 Lucca, Duchy of, XIII. 708—population of, XII. 634—weights and measures,

XXI 812

——— Italian city, XIII. 708. Luccock (Mi), his estimate of the supply of wool, XXI 906

Luce Abboy, XXI 864.

—— Bay, XIII. 709, XXI. 863.

Lucena, town in Spain, XIII 709. LUCERA, town of Naples, XIII 709. Lucernariadæ, polypes, XXI 1006 Lucerne, in Switzerland, XIII. 710; XX.

-lake of, XIII 710, XX 889, XXI. 494—temperature of, VI. 777.—culture of, II. 829

Luchssapphir, mineral, XV. 88. LUCIA (St), island, XIII. 710. LUCIAN (St), presbyter of Antioch, XIII.

711-his recension of the New Testament text, XIX 835, 836. LUCIANISTS, XIII 711

LUCIANUS, XIII. 711—his description of a disease at Abdera, II. 23—richculed apparitions, III 315—on the Deluge, VII.

Lucid-disc micrometer, XIV 757. 

ness of the manufacture, X1X. 619. Luciferians, sect, XIII. 712. Lucilius (Caius), XIII 712.

Lucimeter, XVI. 535. Lucina, Egyptian goddess, VIII 439. genus of insects, IX. 254. name of Juno, XIII 20

Lucinidæ, fossil mollusks, XVII. 107, 108.

- genus of mollusks, XV, 350-fossil. XVII. 107.

Lucioperca, genus of fishes, XII. 276. Lucinopsis, genus of mollusks, XV. 350fossil, 108.

LUCRE (G. C Friedrich), XIII. 713—on the Book of Revelation, XIX. 98, 99. LUCRENWALDE, town in Prussia, XIII. 713

LUCKNOW, in Hindustan, XIII 713; XI. 477—outbreak of the sepoy mutiny at, XVI. 307—letaken from the rebels. 215

LUCKPUT BUNDER, in Hindustan, XIII. 714

Lucon, town in France, XIII. 714 LUCRETIA, XIII. 714.

LUCRETIUS, Roman poet, XIII. 714-philosophy of, I 186, n.—on apparations, III 308—poetry of, XVIII. 104—Wake-field's edition of, XXI. 681. Lucrino (Lago), XIL 637; XX. 239.

Luculhte, XV. 92

LUCULLUS (Lucius Lucinius), XIII. 715; XIX. 322—his invasion of Armenia, III. 616-his banqueting-rooms, IV 421 -hbrary, XIII 384-his expedition

against Mithridates, XV. 284.

— (M Lichnics), XIII 715.
Lucy (Sir Thomas), XX. 82, 83. Lud, VIII. 46.

LUDEHAUNAH, XIII. 715. See Loodians. Luders (General), his invasion of Transylvania, XII 25.

in, XVII. 116.

LUD-LUT LUDLOW, town in Shropshire, XIII. 716 LUDOLPHUS (Job), XIII 716. LUDWIGSBURG, XIII. 716. LUDWIGSLUST, XIII. 716. Lug-worm, XI. 296. LUGANO, Swiss town, XIII. 716; XX. 882 - (LAKE OF), XIII. 716, 644, XII. 637; XXI. 248. LUGDUNUM, XIII 716-Batavorum, 717. Lugo, in the Papal States, XIII. 717.

in Spain, XIII 717, X. 373

Lutprand, Lombard king, XIII. 640, 641, 642; XII. 642. on a musical tree, XVI 709 LUKE (St), evangelist, XIII 717—his Gospel and the Acts, XIII. 718 - (St), hospital, XIII 673 Lukin's experiments on the seasoning of timber, VIII 209 LULLI (Giovanni Battista), XIII 718. LULLY (Raymond), XIII. 719. Lumachello, XV 92. Lumbago, XIX. 142 Lumbar vertebræ, III. 6, 75. Lumbering, timber trade, VI. 142; XXI. Lumbricus, genus of annelides, XL 300 Luminosity of plants, V. 169—of insects, IX. 107; XIII. 458—of the ocean, ib; XVII 574; XXI. 998 and n. 2-of decaying animal matter, XIII 457 Luminous waves, I. 898—barometer, IV. 455—jar, VIII 545 Lumley Castle, VIII. 267. Lunar observation, I. 833, 229 - theory, 814 et seg , 825 et seg., 849. month See Moon. year See Year. distances, XVI. 38; XIII 686-to find the longitude by, XVI. 48, 689 Lunardi's aerial voyages, II. 178. Lunatic asylums, XIV. 426—in Dublin, VIII. 223—Crichton Institution, Dumfries, 240-in Russia, XIX. 534. Lunatics, VIII. 748 - proportion of, in asylums, to the population, 749 Lunawara, in Hindustan, XIII. 719. Luncarty, battle of, XIX. 745. LUND, town in Sweden, XIII. 720at, 427—university, XXI 492 LUNDY ISLAND, XIII 720, VII 764. Lune of Hippociates, XX. 520. - nver, XIII. 177, 180 — aqueduct over, III 388 — plans of its channel, XVI. 72, 84—improvement of its navigation, 77-increase of tidal water by works on, 84-physical characteristics of. 87. LUNEBURG, town of Hanover, XIII. 720province, XL 211. LUNEL, French town, XIII. 720 LUNETTE, in fortification, XIII. 720; IX. LUNÉVILLE, town in France, XIII. 720treaty of, X. 121; XV. 793; XVIII. 655 Lungs, III. 66—effect of training on the, VIII. 25—necessity of air to, 55—functions of, XVII. 662—excretion from, 665-test, by their floating or sinking in water, of a child having died before or after birth, XIV. 429. - of the lower animals, III. 112-in the mammalia, XIV. 133—inflammation of, in the domestic animals, XXL 572 Lunnite, mineral, XV. 103. Lunule, in bivalve shells, XV. 341, 342. LUPERCALIA, Roman festivals, XIII. 720. Luperci, Roman priests, XIII. 720 Luperus, genus of insects, IX. 150. Lupulin, V 206 Lurcher, dog, XI. 772 Lure, for hawks, XI. 249. Lurgan, town in Ireland, XIII. 721. LUSATIA, in Germany, XIII. 721. LUSITANIA, XIII. 721; XX. 458. LUSTRATION, XIII. 721. Lustre of minerals, XV. 58. LUSTRUM, XIII. 721. LUTE, XIII, 721 stringed instrument, XIII. 722; XV. 716 Luteolin, VIII. 295. Luteta, planet, IV. 91

LUT-LYE Lutf Ali Khan, king of Persia, XVII 441. LUTHER, XII 722; XVIII 485-his contempt for Aristotle, L 16-instances of credulty and superstition, 238-Mosheim on his theological system, 21, n. 1—his Colloquia Mensalia, II. 740; L. 238-his combats with the devil, III 312-his German Bible, IV 702-his propositions against indulgences, XIL 378—his liturgy, XIII 516—Augsburg Confession partly drawn up by, IV. 240 Archdeacon Hare's vindication of, XI. 228-his connection with Melancthon, XIV. 476—his share in effecting the Reformation, XVIII. 821 et seq—his works proscribed in Scotland, XIX 772. LUTHERANS, XIII 740-ordination among, XVI 704—their hymns, XII 190—their places of worship in England, VIII 745; in Europe, IX. 394, in Hungary, XII. 16—their churches in America, XVIII 492; in Prussia, 658; Russia, XIX 529. Luton, XIII. 741; IV. 569—Luton Hoo, Lutra, genus of mammalia, XIV 159 Lutrana, genus of mollusks, XV. 350-fossil, XVII. 108. Lutterloch (Henry), V 504 Lutterworte, in Leicestershire, XIII 741, 321 Lutz (M), his balance springs, VII 29. Lutzelbourg (Count de), on magnetic somnambulsm, XX 423 LUTZEN, in Prussian Saxony, XIII 741-battle of, X. 161, XX, 850. Luvarus, genus of fishes, XII. 298. LUXEMBURG, province of Belgium, XIII 741, IV 601. GRAND DUCHY OF, XIII 741, IV. - (Duke of), XIII 742 LUXEUII, town in France, XIII 742. LUXER, or El-Uksur, in Egypt, XIII. 742; VIII 507, III. 436 Luxury, not disadvantageous, XVIII 256. Luz, or Bethel, IV 686 Luzaney (Gommer de), on birds, XVI 725 Luzia (Santa), Cape Verde Island, XXI 544 LUZON, or Lucon, island, XIII 742; XVII. LYBEA, XIII. 743 See Libya Lybster, Caithness-shire, height of waves at. XI. 224. Lycabettus, hill near Athens, IV 171. Lycæna, genus of insects, IX. 208. LYCÆUM, XIII. 743, IV. 170. LYCAON, XIII. 743 LYCAONIA, in Asia Minor, XIII. 744. LYCIA, in Asia Minor, XIII. 744—language, 200, 210-coms of, XVI. 377sculptures discovered in, XIX. 853 Lycodes, genus of fishes, XIL 310. Lycodon, genus of repules, XIX. 56. Lycomedes, king of Scyros, XIII. 744. Lycon, philosopher, XIII. 744—an accuser of Socrates, XX. 380. Lycoperdina, genus of insects, IX. 151. Lycoperonia, genus of insects, IX.

Lycoperon, Greek poet, XIII. 745.

Thessalian, XIII. 764. Lycopodiaceæ, nat. order of plants, V. 216 —reproductive organs of, 144—embryogený in, 157. Lycopodium clavatum, seeds of, employed for imitating lightning, XVIII. 706. Lycopolis, VIII. 505. Lycosa, genus of arachnides, III. 383. Lyctus, genus of insects, IX. 142. LYCURGUS, Spartan lawgiver, XIII. 745; XX. 499. orator, XIII. 746. LYSIMACHUS, XIII. 753. LYSIPPUS, XIII. 753, XIX. 857. LYSONS (Daniel), XIII. 753. (SAMUEL), XIII. 754. Lycus, genus of insects, IX. 107. LYDGATE (John), XIII. 746 — poetry, XVIII 120. LYDIA, in Asia Minor, XIII. 746-mo-Lystra, genus of insects, IX. 169. narchy of, XV. 413-coins of, XVI. 378. Lystionichus, genus of insects, IX. 132 Lydian stone, XV. 69. LYDIUS LAPIS, XIII. 749. Lyte (Maxwell), his photographic process,

LYE (Edward), XIII. 749.

its use in bleaching, IV. 768, 769

et seg.
Lyell (Sir Charles), on the Falls of Niagara, IV. 135, 136—on the Deluge, VII.

722-his description of Kent, XIII. 64-

LYG-LYT on the elevation of the Swedish shores, IV. 403; XX. 860-on the geology of Madeira, XIII. 801-on igneous rocks, XV. 131-on the deposits of rivers, 140 on the elevation and depression of land, 167 and n 2-on the colitic coalfield of Richmond, 209-on the "loess' or "lehm" of the Rhine, 217—on the quantity of matters suspended in rivers. XVI 86, n 1-on reptilian foot-marks at Greensburg, XVII. 132-on the fossil remains of birds, 154, 155—his subdivision of the tertiary strata, 637—his theory of volcanoes, XXI. 606 ygaeus, genus of insects, IX 162. LYME-REGIS, in Dorsetshire, XIII 749. Lymexylon, genus of insects, IX. 112. LYMINGTON, XIII. 749. shrimp, VII 543. Lymph, II. 782—cells, XVII. 650 Lymphatic glands, II 805. Lymphatics, II. 803-discovery of the distinction between the lacteals and, 761-further discoveries respecting the 766-their connection with the years 795-valves of, 805 Lynch (Captain), his survey of the Dead Sea, III. 761; XVII. 186, 187

LAW, XIII. 749. LYNCHBURG, in Virginia, XIII 749 Lyndhurst (Lord), on the Warrender di-vorce case, VIII. 72, n. Lynedoch (Lord), IV. 652. LYNN, or Lynn-Regis, in Norfolk, XIII. 750—sand for window glass found near, X. 662 n Massachusetts, XIII 750 Lynx, XIV 171-its fur, X. 349 LYON KING-AT-ARMS, XIII. 750-court of, XT. 320. (GEORGE FRANCIS), XIII. 750—his visit to Fezzan, IX. 530—his arctic voyages of discovery, XVIII 171 (David), on magnetic metals, XIV. 15 (Loch), XVII 455. Lyon's Inn, XIL 885. Lyonnais, French province, X. 277-wines of. XXI, 883. LYONNET (Peter), XIII. 750-his work on the caterpillar of Cossus Ingniperda, IX. 5, 212. Lyons, XIII 751; XIX. 150—Mongol-fier's balloon ascent from, II 176— events at, in 1793, X. 80—Pont de l'Archevêche, XII. 581-troubles at, in 1834, X. 210 — population, 277 — silk manufacture at. 255. XX. 278. - Gulf of, XIII 752. Lyonsia, genus of mollusks, XV 350. Lyopomata, order of mollusks, XV. 339. Lyra, constellation, IV. 79. Lyrate leaf, V. 90 LYRE, XIII. 752. Lyre-tail, bird, XVI. 754.
LYRIC POETRY, XIII. 752-of Greece, Lyriocephalus, genus of reptiles, XIX. 32 Lyrodesma, genus of mollusks, XV. 349— fossil. XVII. 106, 105 Lyrops, genus of insects, IX. 195 Lysander, Athens taken by, IV 208. Lysaks, Greek orator, XIII. 752—his oration for Socrates, XX 392. Lysicrates, choragic monument of, III 442, 462, 468; IV. 164-imitation of, in D. Stewart's monument, Calton Hill, Edinburgh, VIII 406. Lysidice, genus of annelides, XI 298.

XVII. 549.

Lythraceze, nat. order of plants, V. 191.

LYTTELTON (George, Lord), XIII. 754-on

LYTTLETON (Thomas, Lord), XIII. 754.

the conversion of St Paul, XVII. 845,

Lytta, genus of insects, IX. 134.

## LYT-MAC

Lytton (Sir Edward Bulwer), sum received by, for the lease of his works, VII 356-his exertions for the reduction of the newspaper stamp, XVI 189—as a novelist, XIX 283—his inferionty to Sir Walter Scott in representing the past, 280—his view of Rienzi's character, 171.

# M

M, letter of the alphabet, XIII. 755-in abbreviations, II 19 Maat (John), XIII 755; IV 758 Maberly (Col.), on the penny postage, XVIII. 411. Mabilion (Jean), XIII. 755—on Egyptian paper, XVII. 248. MABLY (G. Bonnot de), XIII 755 MABUSE, or Maubeuze (Jan de), XIII 755. Macacus, genus of mammaha, XIV. 141 fossil, XVII 167. MACADAM (John Loudon), XIII. 755-on road-making, XIX. 225. M'All (Mr), on the iron ores of Ireland, XII. 541. MACAO, in China, XIII. 755. MACARONIC verse, XIII. 756-origin of the name, VIII. 249, n 3—Dunbar's examples of, 249; and Drummond's Polemo-Midduna, 194, n. 2—Folengo's, TX. 749. Macarthur (Capt. John), an eminent wool-grower in New South Wales, XXI 911. MACARTHY ISLAND, XIII. 756, X. 894 MACARTNEY (George, Earl), XIII 756-China, VI. 590-on Chinese theatrical exhibitions, 579.

— Cock, XVI. 790.

MAGASSAR, XIII. 756, VI. 361—oil, XVI. 495 MACAULAY (Catherine), XIII 756. (Lord)-his account of the trial and character of Richard Baxter, IV. 521-on the character of Lord Arlington, 654; Earl Temple, XI 59; Earl of Oxford, 229; Duke of Berwick, IV 678; Dr William King, XIII. 90on the state of the law, 271—on the Duke of Marlborough, VI. 715—on Colher's View of the Stage, VII. 115 on Cromwell, 515—his verses on the Dioscuri, VIII. 36—on Milton, XV. 28 on the copyright of books in former times, VII. 355—his survey of British society prior to 1688, XL 547-effect on Robert Hall of one of his articles in the Edinburgh Review, 194—on the early history of Rome, XVI 261—on the Printing License Act, XIII 358his charges against William Penn, XVII. 391—on Sir Win Petty, 502—on the character and eloquence of the Earl character and eloquence of the Land of Chatham, 722, 723—on Boswell as a biographer, V. 64—his elevation to the peerage, XVI 282—his character of Seneca, XX. 47—on Bishop Spat, 518—on Voltaire's mission to Fiederick the Great, XXI 659. Macaws, birds, XVI 780.

MacBette, XIII 757; XII. 442; XIX 746

—tragedy of, VIII 150. Macbride (Capt), on the British navy, V. 519. MACCABEES, Books of, XIII 757—supposed origin of the name, XII. 769 Maccabeus (Judas), XII. 733, 769, XVII. Maccail (Hugh), his martyrdom, V. 428. Maccaroni, XIII. 757; XX. 249. M'Carthy (Sir Charles), III. 726. M'Carthy's Island, X. 394. M'Clelland (Dr), on Indian fishes, XIL 257, 258, 263 Macclesfield, Countess of, VIII. 70. - town in Cheshire, XIII. 758. M'Clintock (Capt.), arctic fossils brought home by, XV. 209—his arctic search ex-pedition, XVIII. 175.

M'Clure (Sir Robert), his discovery of a

north-west passage, X. 299, 474; XL

#### MAC-MAC

38-his northern explorations, XVIII. 174.

M'Cormick's reaping machine, II 276 M CRIE (Thomas), D D., XIII 758; XVIII 500, 502-his Life of Knox quoted, XIII 124, 126, et seq —his Life of Melville, XIV 489—on Dr Andrew Thomson, XXI 233-on the course of study in St Mary's College, St Andrews, XXI. 474.

Maccullagh (Prof), I 919 and n. 2-on optics, XVI 549, 668, 680, 685.

MACCULLOCH (Dr John), XIII. 759second sight, III 318, n 1-on vitrified forts, IX, 790

M'Culloch, on the prevalence of fevers and other diseases in Ireland, XII 504 -on absenteeism, II 50-on commercial companies, VII 218-on the payment of wages out of the poor-rates, VIII. 749-on fairs, IX. 468

Macdiarmid (John), XIII 759. MACDONALD (Duke of Tarentum, Marshal). XIII. 760, X. 111, 154

- (Dr), on digestion, VIII 21. (J), on the variation of the needle, XIV 54

- and Leslie's granite-works in Aberdeen, II 31.

Macdonnell (Governor), on the river Gambia, X. 394.

Macdowall (C), his clock escapement, VII. 10; applied to watches, 32

MACDUFF, town in Banffshire, XIII 760. MACE, XIII. 760; V 140, 204—of the Banda Islands, IV 410

MACEDO (Jose Agostinho de), poet, XIII 760 – Egyptian deity, XI. 386

\_\_\_\_\_Egypam deny, Al 386
MAGEDONIA, XIII 760; XI 12; XIX 312
—Macedonian army, III. 626, era, VI
671; months, 1b; empire, XI 542;
XV. 412—coinage of, XVI 368. See Alexander the Great.

MACEDONIUS, name of two bishops of Constantinople, XIII. 776.

MACER (C Licinus), Roman historian,

XIII 776.

- officer of the law courts, XI. 321 MACERATA, Italian city, XIII. 776-delegation of, XVIL 243-university of, XXI. 492.

Maceration, perfumes prepared by, XVII. 408, 409

Macfarlane (Mr), his account of the Turkısh army, III. 659, 660, 661 M'Gauley's electro-magnet, XXI 641.

Macgill (Mr), on the Black Sea, IV 740. MACGILLICUDDY REEKS, XIII 776, 72.

Macgillivray (John), on the Louisiade Archipelago, IV. 268—on the natives of New Guinea, 264

- (Dr William), XIII. 776-on the scenery of the Hebrides, XI 279-his correction of Audubon's style, IV 239—his Lafe of Aristotle quoted, XIV. 122 on British birds, XVI. 734, 742, 747, 764, 792.

Macgregor (Mr), on the Falls of Niagara, VI. 136-on Halifax, XI, 188. M'Grigor (Sir James), on the plague,

XVII 748 et seq.

Macgure (Lord), his rebellion, V 319

Machairodon, fossil tiger, in the pampas of South America, XVII. 608, 639.

Machairodus, fossil quadruped, XVII. 172—dentition of, XVI. 464, 479, 480, n. 2. Machaon, XX. 809.

Machetes, genus of birds, XVI 804. Machiavelism, religious, its bad effects on philosophy and morals, I. 28.

MACHIAVELLI (Nicolo), XIII. 777-character and principles of, I. 22 et seq .his real intentions in writing The Prince 234-no friend to the priesthood, although they have often availed themselves of his policy, 23-Hume's estimate of, 24-his alleged vindication of himself and writings, 235-M. Daunan's notice of his life and writings, 286influence of his opinions on Italian diplomacy, VIII. 89--comedy by, XVIII. 110-Frederick the Great's work against, 65L

Machilis, genus of insects, IX 261.

#### MAC-MAC

Machin (John), I 700, n. 1-on the quadrature of the circle, ib; XX. 523

Machinery, effects of its use on the condition of the people, VII 457-effect of, in putting down combinations, 163hydraulic, XII 163—for the manufacture of iron, 558-excellence of British, XIV. 277-exportation of, ib.-improved machinery alleged to be injurious to the operatives, 278-opposition to the introduction of, XXI. 781-provision against accidents from, 790-unguents for resisting fraction in, XIV. 405; and to prevent heating, 408-manufacture of, in France, X 256; Leeds, XIII 313 See Friction, Mechanics

Machines, XIII 783-theory of, XIV. 383; writers on, I 881—agricultural, II 270—parts of a machine, XIV 383 for raising water, XII 174-modulus of, XIV 404—purposes and effects of, 414—classification of, ib — Coulomb's theory of simple, VII. 462-printingmachines, XVIII. 558—of varying velocity, working of, XIV 410

Machinethr, Welsh town, XIII 783.

Machler (F J), his work on insects, IX. 22.

Machlinia (William), printer, XVIII 537; XXT 401

Machæra, genus of mollusks, XV. 350. Machonochie, on the preservation of timber, XX 167

Macielowski (Dr), on the character of Livy and Dionysius as historians, VI. 739-on the feudal system, IX. 521. Mack (General), V. 599; X. 110, 137, 138;

XXI 417 Mackay (General), V. 440, 441.

MACKENZIE (Sir Alexander), XIII. 783;

XVIII. 170. - (Dr), on the Admirable Crichton VII. 498 and n 2.

(Sir George), XIII 783; V. 429, 718—his defence of the treatment of Charles I by the Scotch, 409, n-his equivocating account of the treatment of Mitchell, 430, n-his character of Lord Stair, VII 632, n. 4-on heraldry, XL 324, 338,

(Sir G Stewart), on Iceland, XII 198, 200, 202—on colourless ink, 383 on hot-houses, XI 726

- (HENRY), XIII 784-has delineated Hume's character in the story of La Roche, I. 368-his novels, XIX. 275. (Mr, of Ardross), on salmon fisheries, IX. 609 n. 2, 610

- (Dr Murdoch), on the plague,

XVII. 748 et seq. - RIVER, XIII. 785; XVII. 605.

Mackerel, XII \*293; IX. 764—fshery of, in Britain, 645, XII. 293; England, VIII 727; Ireland, IX. 634; Dorsetshire, VIIL 112.

- sky, XIV 656. Mackinac, climate of, XXI. 421. Mackinaw, straits of, XIV. 739, 740.

MACKINTOSH (Sir James), XIII. 785-his Dissertation on the Progress of Ethical Philosophy, I. 291; circumstances under which that Dissertation was undertaken, 293-Dr Whewell's remarks on his ethical views, 296; on his doctrines regarding conscience, 298; association of ideas, 305; the relation of religion and morality, 307; and on free-will, on the independence of Geneva, IV. 391 - on the balance of power, 1b. and n. 1 - on the reverence due to originality of mind, I. 808 - on the early Britons, V. 373 et seq .- his bills for the improvement of the criminal code, 633, 638—his characters of Playfair and Jeffrey, I. 803, n., of Canning, VI. 177; Sir S. Romilly, VIII 241; George Wilson, ib.; C. J. Fox, IX. 858—mistake of, in regard to the opponents of Hobbes, VII. 579, n. 3—on Cardinal Wolsey, VIII. 698-on the confiscation of church property by Henry VIII., 702-on Butler's Analogy, VI 33 - on the alleged intention to persecute the Catholics in the reign of

## MAC-MAC

Edward VI, VIII 710-his account of Edgar Atheling, 668 n -on Gibbon and Robertson, X. 617-his intimacy with Robert Hall, XI. 191-on the Independents, XII 372—his account of the hbrary at Goa, XIII 431—on association of ideas, XIV 596-Mill's criticism on his Dissertation, XV 12-his connection with the newspaper press, XVI. 185-on the character of Hume, XII 7 on Paley's ethical theory, XVII 201 -his commendation of Suarez's treatise, De Legibus, &c, XX. 786.

Mackintosh (Mr), conservatory constructed by, XL 755.

Mackintosh's waterproof cloth, VI. 203 MACKLIN (Charles), XIII. 787 MACKNIGHT (Dr James), XIII 787. Maclaren, on the site of Troy, XXI. 356

M'Lauchlan (Rev T), on Ossian's poems,

XVII 7 and n MACLAURIN (Colin), XIII. 787; I 806, 823 -his opposition to Leibnitz's law of

continuity, 133-contributed to the advancement of physical astronomy, 692
-his method of expounding forces by co-ordinates advanced the science of dynamics, 720-on the earth's figure. 772: IX. 552-on the tides, I 680-on the geometric properties of bees' combs, IV. 578-on the inverse problem of centripetal forces, VIII. 363-on fluxions, IX. 676; X. 505—his attempt to demonstrate the impossibility of the existence of grants, 605-on the motion of fluids, XII. 72-his theorem in fluxions, IX. 692—on the tides, XXI. 250

Macleay (Wm. Sharpe), on the classification of animals, III. 173-his classification, 191; IX. 59, 60-on the metamorphosis of insects, 56, 57—on the order Strepsiptera, 220, 221—on the Linnæan algæ, III. 194-his entomological works, IX 13-on zoophytes, XXI 973.

M'Lelland (Dr), on the Indian cyprinidæ, XII. 257. Macleod (Mr), his account of a large ser-

pent, XIX 60 Macles, twin crystals, XV 51.

Machse (Joseph), his surgical anatomy. III 74

Macluia aurantiaca, tree, XVII. 764 Maclurea, fossil mollusks, XVII. 109, 110 Maclurite, mineral, XV 89.

M'Mahon (General), XIX. 644-created field-marshal, ib. M'Millan (Rev. John), XVIII. 502.

Macnab (John), his experiments on freezing mixtures, VL 353 Macnaughton (Sir Wm.), murder of, V.

667 : II. 208.

MACNEILL (Hector), poet, XIII. 788.
M'Neill (Sir John), XVII. 442—1ails used by, for the Great Southern and Western Railway, XVIII. 755.

origin of the family of, XI 280, n.

MACNISH (Dr Robert), XIII. 789. MACON, town in France, XIII. 789.

in Georgia, United States, XIII.

Maconochie (Captain), his mark system for prisoners, XVIII 584.

Macpherson (James), XIII 789—his publication of Ossian, XVII. 5—Dr Blair's

patronage of, and dissertation on; his translation of Ossian, IV. 750.

- on the banking crisis of 1792-93. XV 459.

Macquaria, genus of fishes, XII. 278. Macquarie (General), his administration

in New South Wales, IV. 272.

— river, IV. 255, XV. 697.

Macquart (Jean), his works on insects, TX. 16

MACQUER (P Joseph), chemist, XIII 790—on dycing, VIII. 274 et seq.
Macraspis, genus of insects, IX 123 Maciaw (Wm.), his bichromatic process in

photography, XVII. 550-his application of photography to porcelain, &c., 551-his improvement on the binocular

#### MAC-MAD

Macready (Mr), his management of Drury Lane Theatre, XXI 174 Macrinus, Roman emperor, XIX. 347. Macrobius (A. A Theodosius), XIII 790 Macrocera, genus of insects, IX 200, 228. Macrocercus, genus of birds, XVI, 780 Macrocheles, genus of arachnides, III. 387 Macrochilus, fossil mollusks, XVII 109, 110

Macrocystis pyrifera, sea-weed, V 229.

Macrodactyla, tribe of insects, IX. 116 Macrodactyles, family of birds, XVI 806. Macrodon, fossil mollusks, XVII 106.

- genus of fishes, XII 251. Macroglossa, genus of insects, IX. 210. Macroglossus, genus of mammalia, XIV. 148. Macronota, genus of insects, IX. 127. MACROOM, town in county of Cork, XIII. 790 Macropeza, genus of insects, IX. 226. Macropodus, genus of fishes, XII 290. Macropoma, genus of fossil fishes, XII 337, XVII 127

Macropthalma, fossil crabs, XVII. 102. Macropus, genus of mammalia, XIV. 176 -teeth of, XVI. 449

Macroramphus, genus of birds, XVI 803 Macrorhinus, genus of mammalia, XIV.

Macroscelis, teeth of, XVI. 451. Macrosemius, genus of fossil fishes, XII 336 Macrospondylus, fossil reptiles, XVII. 152. Macrostoma, genus of fossil fishes, XII 344. Macrotherium, genus of fossil mammals, XVIL 166.

Macroura, tribe of crustacea, VII. 541. Macroundæ, or Macrounds, family of fishes, XII 270.

Macrourus, genus of fishes, XII. 270. MacSmochain, Dun, vitrified fort, IX. 790. Mactra, genus of mollusks, XV 350, 347. Mactridæ, family of mollusks, XV. 350. M'William on dry rot, VIII. 207.

MADAGASCAR, XIII. 790; II. 229—opyornis of, XVII. 637—malagasi of, IX. 347—land leech of, XI 302, n—1eptiles, XIX. 53-ordeal poison of, V. 199.

Madai, VIII 45.

MADDALONI, town in Italy, XIII 796. Madden on the vegetation of the Himalayas, V 226.

(Sir Frederick), on Shakspeare, XX 70, n. 1. MADDER, XIII. 796; VIII. 282, 288, 291,

317-in the Ionian Islands, XII 445its culture in Greece, XI. 16; France, X. 248 - order of plants, V. 191.

IV. 184—weights and measures of, XXI. 812-wine, 887, 889, 890-map of, II. Plate.

\_\_\_\_\_ river, XIII. 801; V. 291; XVII. 604; XVIII 382.

MADEIRAS (The), XIII 796; IL 229. Madia oil, XVI. 495.

Madison, city in Wisconsin, XIII 802. in Indiana, XIII 802

(JAMES), president of United States, XIII. 802.

Madness. See Mental Diseases, Insanity. Madocks (W. A.), his embanking enter-prise in Wales, VIII 647

Madras, XIII. 802; XI 463—transactions at, in 1795, 501 - judicature at, 525 -operations of the army of, in suppressing the Sepoy revolt, XVI 812.

- College, St Andrews, III. 136 kind of handkerchief, VI. 98. Madreporaria, stony corals, XXI 1005. Madreporale, XXI 1005.

Madrid, XIII. 804-Academies of Painting and History at, IL 68, 69-Royal Spanish Academy at, 71—libraries at, XIII. 409
—meteorological observations at, XIV. 688-insurrection at, in 1822, XX. 476; insurrections at, in 1854, 1856, 483—por-celain manufacture at, 490—painting at 494.

MADRIDEJOS, town in Spain, XIII. 806. MADRIGAL, XIII. 806. Mad Staggers, XXL 575.

#### MAD-MAG

MADURA, in Hindustan, XIII 806, 804. - island, XIII 806; XII. 702, 709tiade with Sumatra, XX. 806. Mæander, river, XIII. 806.

Mæcenas (Caius Chnius), XIII. 806, XIX. 335—his patronage of Horace, XL 627, of Virgil, XXI. 594; Virgil's Georgics suggested by, 1b

MAELSTROM, XIII 807; XVI 319. Maelzel (J. N.), inventor of the metro-nome and other instruments, XIV 695. Maena, genus of fishes, XII 288

Maenidæ, or Maenoids, family of fishes, XII. 287, 288. Maenuphthes, XI. 389.

M. Eoris, Palus or Lacus, XIII. 807; IV. MAESTLIN (Michael), XIII. 807.

MAESTRICHT, town in Holland, XIII. 807 -chalk, XV. 211-population, XI 582 Marfer (F. Scipione, Marquis), poet, XIII 808—ascending thunderbolt seen by, VIII 583—his Verona Illustrata, XVII. 213.

(John Peter), his Life of Loyola, XII. 749-early notice of tea by, XXI.

Magadoxo, Arabian town, XIII 808 MAGALHAENS, or Magellan (Fernando), XIII 808; XVII 336—his circumnavigation, X. 472—his discovery of the Ladrone Islands, XIII. 150

Magars, Nepaulese tribe, XVI 144. Magatus (Cæsar), XX. 818

Magazine, Blackwood's. See Blackwood's Magazme

Gentleman's, VI 350.

Magdalen College, Oxford, XVII 35; XXI 459-Cambridge, 466

MAGDALENA, river, XIII 809, XVII 647.

department of New Granada, X.

MAGDEBURG, XIII 809—Tilly's siege of, XX. 849—Magdeburg experiment, in pneumatics, IV. 452.

MAGELLAN, or Magalhaens (Strait of), XIII. 809-temperature of the climate, II.

Magellan's barometer, IV 455. MAGENDIE'S (François), XIIL 809-on the veins, II. 792, 793, 794—on the nerves of motion and sensation, 814—on ex-

halants, 808-his dietetic experiments, VIII. 18—on gravel, 24.

Magenta, battle of, in 1859, XIX. 644.

MAGGI (Jerome), XIII. 810.

MAGGIORE (Lago), XIII. 810. See Lago Maggiore.

Maggot, cheese maggot, IX. 254—used for bait, III. 155—in sheep, XXI. 579. MAGI, XIII 810; XIV. 421.

Magic, of the Druids, VIII. 189-as prac-

tised in Egypt, 443.

disc, XVI. 697. lantern, XVL 696.

- SQUARE, XIII. 810; I 704. Magicians, persecution of, by Valens, VII.

Magilus, genus of mollusks, XV. 383. Maginan, his account of a remarkable cloud, VII. 39.

Magina (William, LL D.), XIII 811. Maginus's burning-mirror, VI 10.

Magiotti (Raphael), on hydraulics, XII. 70 Magistrates, the Economists on, VIII. 380. Magliabecomi (Antonio), XIII. 811. Maghabecchian Labrary, XIII. 415; IX

Magnanimity, I. 423.
Magne-crystallic force, I 981.
Magne-optic force, L 981

MAGNENTIUS, Roman emperor, XIII. 811; V. 380; VIL 303.

Magnesia, city of Iona, XIII. 812.

Magnesia, city of Iona, XIII. 812—in chemistry, VI. 487; XV. 65—in the composition of the earth's crust, XVII. 619-in plants, II 388-as an ingredient in limestone injurious to vegetation, XVII. 620.

## MAG-MAH

Magnesia-alum, XV. 97.

Magnesian limestone, XV. 145, 148, 205fossil fishes of, XII 348, 349-lace-coral fossils of, XVII. 98-as building stone, XX 712-Tennant on, XXL 153.

Magnesite, mineral, XV 92. Magnesium, VI 487.

Magnet, influence of, on all bodies, I. 980
—Gilbert on, 570—artificial, XIV, 5, 6 method of making, 68-attraction and repulsion of, 20, 21 - power of, to communicate magnetism to other bodies. 21-polarity of, 20-reaction of iron on. 21-distribution of magnetism in artificial, 22-effects produced by breaking, 24-mutual action of, 44-arming and preserving, 74 - electro-magnets, 1b supposed origin of the name, 266 employment of, in curing disea

XX. 414 - shock from, XXI 646-Ampère's rotatory magnet, 639 — Dr Knight's experiments with, 646

Magnetic uron ore, VI. 490, XV. 107.

— pyrites, XV. 115.

Magnetical Observatory, Dublin, VIII 223.

Magnetite, mineral, XV 107.

MAGNETISM, XIV 1, L 740, 990, XVII 617—Robison's writings on, I 872—optical changes induced by, 981—phenomena, origin, and history of, 740 et seq -recent history of terrestrial, 801, 990, Gauss's mathematical theory of, 990-magnetic intensity, 991-variations of magnetic elements, 992magnetic storms, ib -British magnetical expeditions, 995 - European magnetical observations, 996—Æpinus on, II. 164—Biot and Gay-Lussac's observations in a balloon, 182, 184-magnetic property of aurora borealis, IV. 247, 249—Cavallo on, VI 345, 346—Coulomb on, VII 462-464— magnetic effects of electricity, VIII. 599—used to produce mechanical energy, XIV. 418 netals, XV. 60—connection between it and electricity, I 800—electro-magnetism, 978; VIII. 581, 600—magnetic influence of the solar rays, XVI 595 magnetic storms, XVII 618-influence of the earth's magnetism on the pendulum of clocks, 388—rotation produced by the earth's, XXI. 639. See Voltage

Electricity, Compass.

— (Animal), XX. 413—Bailly's report on, IV 374; XX. 419.

Magneto-electricity, L 979; VIII. 532, 600; XXI. 644-magneto-electric apparatus, 646

Magnetometers, XIV. 82, 83. Magnificent, ship, her dangerous position,

and preservation from, XX. 19
Magnifying power, I 839—of microscopes
XXI 128—of single microscopes, XIV 771—used in astronomy, L 839—its limits, 1b.

Magnitude, our ideas of, relative, IX. 122 -perception of, XIV. 565.

Magnoha, XVII. 761.

Magnohacea, nat. order of plants, V. 180
—region of, 227; XVII. 627
MAGNUS (St), bay of, XIV. 92.
—(Sb), Cathedral of, XIII. 102

(Prof), on the motion of fluids, XII. 76-experiments on, 154, 155-on the water-bellows, 183-on the expansive force of steam, XX. 558.

Mago, Carthagenian generals of that name, VI. 283, 295, 296.
Magog, VIII. 45; X. 460, n., 701.

MAGONTIACUM, XIV. 92. Magot, or Barbary ape, XIV 141.

Magples, XVI. 764.
Magrebians, Alexandria taken by the, IL

Maguey, culture of, in Mexico, XIV. 717 Magyars, in Hungary, XII 10; IV. 318 Maha Bandoola, Burmese leader, V. 784. Maha-welli-ganga, river, XXL 351; VI. 391.

Mahabuleshwa, in Hindustan, XIV. 92. Mahabuleshwa, in Hindustan, XIV. 92. MAHANUDDY, river, XIV 92. MAHARAJPOOR, in Hindustan, XIV. 92.

# MAH-MAI

Mahavilla-Ganga, river in Ceylon, VI 391 Mane, in Hindustan, XIV 93 island, XIV. 364, XX. 68. Maherbal, VI 295. Mahim, in Hindustan, XIV 93. Mahmoodeeyeh Canal, VIII 494. Mahmoud's Indian conquests, III 744,

IX. 478. MAHMUD I, sultan, XIV. 93; XXI 370. ——— II, sultan, XIV 93, XXL 373.

king of Persia, XVII 439. MAHOGANY, XIV 93; XI 610, 612; V. 187—specific gravity of, XII. 89—its use in joinery, 817—in Hayti, XI 254—as timber, XXI 277—ship built of, ib.
——order of plants, V 187
MAHOMET, or Mohammed I, XIV. 94,

XXI. 368. - II., sultan, XIV. 94; XXI 368

- III, XIV. 94; XXL 369 —— IV, sultan, XIV. 94; XXI 370. Mahometan power in Asia, III 743 MAHOMETANISM, XIV. 94. See Mohammedanism.

Mahommed Abulwafa, II 483, Ben-Musa, II 483 Mahommedan year, VI 79, 673. Mahommedans. See Mohammedans. Mahon, Port, in Minorca, XV. 251. Mahia, in Arabia, III 341, 359. Mahrartas, XIV. 94; XI. 464, 491—rise

and progress of their power, 478, 479 -their war with the Afghans, 481-Wellington's operations against, XXI.

Mar (Angelo), XIV 95-Cicero's treatise De Republica discovered by, VI 721; XIII 411-fragments of the Theodosian code discovered by, VI 741—his researches among palimpsests, XIII 413, XVII 207-works of Tronto discovered by, X 316-part of an oration of Isæus

discovered by, XII 624.

MAI-MAITCHIN, XIV 97 See Kia

MAIANO (Benedetto da), XIV 96. Maida, town of Naples, XIV. 96-

of, V. 602; XX. 241.

MAIDEN, an instrument for beheading, XIV 96, 445; IV. 591; XL 88; VIII. 391, 392.

Maiden-hair, fern, V. 216; II 141. Maidenhead, in Beiks, XIV. 97.

Maids of honour, XI. 776
Maids of honour, XI. 776
Maidstone, XIV. 97—population of, XIII
67—its culture of nuts, XI 717. - (Mr), on the character of Cromwell, VIL 515 and n 1

Mail coaches, VII. 43—system of posting by, XVIII 407, 408, 415—robberies of, 407.

coat of, VII. 45 Mailed cheeks, family of fishes, XII. 279.

Mailla (J. A. M de Moyriac de), XIV. 97

—his History of China, VI. 559, 577, 585

Maillard (Stanislaus), X. 56. Maillet (M.), on the transportation of beehives in Egypt, IV. 587.

Mails, conveyance of, XVIII. 415—ocean mail systems of different countries, 425; of Great Britain, 426

MAIMBOURG (Louis), Jesuit, XIV. 97 MAIMONIDES, Jewish rabbi, XIV 97-his digest of the Talmud, XXI 16

MAIN, or MAINE, river, XIV. 98; IV. 517.

(Rev. Robert), on the planet Saturn, IV 92.

MAINE, State of, XIV. 98; XXI. 419debt of, 428—wines of, 888.

French province, XIV. 99; X. 277

DE BIRAN (F P. Gonthier), XIV.

99 MAINE-ET-LOIRE, XIV. 99. Maineduc (M.), mesmerist, XX. 431. Mainland, one of the Shetland islands,

XVIII. 285; XX. 113. Mamots, XI 14. Mainspring of a watch, VII. 27. Maintenon (Madame de), XIV. 100.

- aqueduct of, III. 336. Mainwaring (Dr), prosecuted by Charles L. V 392.

Maio, Cape Verde Island, XXI. 545.

# MAI-MAL

Mair (John), on book-keeping, V 15
(John), on logic, XIV 102, XIII.

Maire, on the degree, IX 550 (Jacob le), navigator, XVII 366. MAIRWARRA, in Hindustan, XIV. 100. MAISTRE (Louis Isaac le), XIV. 100. See

(COUNT JOSEPH MAIRE DE), XIV. Maitland Club, X. 653.

- (Mr), his character of Hector Boyce, V. 254.

on public libraries, XIII 400. (SIT RICHARD), XIV 101.

(Sir William), of Lethington, XIX. 782 et seq.

Maittaire (Michael), on early printed books, IV. 708

Maize, or Indian corn, XIV 101; V 215; XVII 630—analysis of, IX 759—culture of, II 313—in Bengal, IV 649; Lombardy, XIII. 654; France, X. 247; Mexico, XIV. 716-quantity imported, VII 400.

Majestx, XIV. 102. Majolica, Italian enamelled ware, XVIII. 432-mezza-majolica, ib. Major, XIV 102

and Minor, in music, XIV. 102
or Mair (John), XIV. 102; XIII.
585, n—on blind Harry, the minstrel, XI 234.

Majorca, island, XIV 102-weights and measures of, XXI 812. Majuh, III 763

Makaira, genus of fishes, XII 297
MAKAILAII, or Macullah, town in Arabia, XIV. 103.

Makerstoun, meteorological observations at, XIV 688. Makhailovitch (Alexei), XIX. 475.

Maklin (F. W.), his work on insects, IX. Mako, Hungarian town, XIV. 103.

Makri, in Asiatic Turkey, XIV 103 Malabar, XIV. 103—teak wood of, XXI. 276, 277.

POINT, XIV. 105. Malabathrum, its supposed identity with tea, XXI. 88.

Malacanthus, genus of fishes, XII 267.
Malacca, XIV. 105, 106, III. 735; XVIII. 382—tin mines of, XV 340—timber trees of, XX. 173—weights and measures, XXI 812.

MALACHI, prophet, XIV. 106. Malachite, mineral, VI 496; XV. 102; XVII 621.

Malachius, genus of insects, IX. 111. Malacodermi, section of insects, IX. 106. Malacolite, mineral, XV 81. Malacology, XV. 319.

Malacoptera, order of fishes, XII. 281. Malacopterous fishes, XII. 229-abdominals, 235. Malacopterygii, sub-order of fishes, XII.

264 Malacosteus, genus of fishes, XII 248 Malacostraca, fossil, XVII. 100, 102 Maraga, town in Spain, XIV 107—raisins of, XVIII 799—insurrection at, in 1836,

XX. 479—wine, 489. Malagasy, XIII. 794. MALAGRIDA (Gabriel), XIV 108. Malagueta coast, XI. 89

Malakoff Tower, Sebastopol, IX. 826; XIX. 509, 510 Malakon, mineral, XV. 87. Malamide, VI 518.

Malam's gas-purifier, X 417. Malan (Cæsai), his hymns, XII. 190. Malapterurus, genus of fishes, XIL 263.

- electricus, XII. 260. Malapterus, genus of fishes, XII. 267.

Malar, Swedish lake, XIV. 108; XX. 861.

bone, human, III. 22.

Malaria, in Greece, XI. 14—in the Cam
pagna di Roma, VI. 123—in Sardinia
XIX. 635

Malay language, XIII. 207. - PENINSULA, XIV. See Malacca. Malays, II. 776; III. 749; XIV. 106-in

## MAL-MAL

Celebes, VI. 361-Amboyna, II 660-Borneo, V 48 — Malacca, XIV. 105, their practice of "running amok," ib — Cape of Good Hope, X. 714-Sumatra, XX. 805.

Malbrouc, in zoology, XIV 140. Malcohas, genus of birds, XVI. 778.

MALCOLM (Sir John), XIV. 108—his account of Madhajee Scindia, XI. 167-on the

character of the Asiatics, III. 749castes among the Persians, VI 315-his administration in India, XI. 508—his proceedings in Malwah, XIV. 120—his account of Persia, XVII 422 et seq

- Scottish kings of that name, XIX. 745 et seq, 752. MALCZEWSKI (Antoni), Polish poet, XIV.

MALDA, town in Hindustan, XIV 109 Malden (Mr), on universities, XXI 444, 450, 451, 454, n.

MALDIVE ISLANDS, XIV 109; XVII 588-language of, XIII 207 MALDON, town in Essex, XIV. 109.

Maldonado, town in Uruguay, XIV 109 MALEBRANCHE (Nicolas), XIV 109-on the secondary qualities of bodies, I 63-on the sensations produced by objects, and the judgment thereupon formed, 64, 65 - his assertion that mistaken judgments relative to the objects of sense result from original sin, 65—cause of his studying philosophy, 74—his work, The Search after Truth, 1b—his genius, ib., 75-blends theology and metaphysics, 74, 75-his controversies on grace, 74 - a bold and free mourer when treating of subjects purely philosophical, 75-his sagacious observations on sorcery, ib.-on men and manners, 76-his character, 77 — developed the funda-mental principles of Hartley, 1b —on the formation of habits, ib—on cause and effect, 78—objections of Leibnitz to his principles, 78, 79 - reasons which led him to conclude that we see all things in God, 79-coincides with some Hindu philosophers, ib. -his resemblance to, and interview with Berkeley, 79, 80— Warburton's opinion of, 80, n. 2—anticipated some of the metaphysical reasonings of Berkeley, 167-his advance towards the true theory of vision, 168his belief in the Cartesian system regarding the soul, 181-on the love of universal order, 335-was the first who taught that virtue consists in pule intentions, 356—on religious society and established church, 1b.

Males, mortality of, greater than in females, TII 230

MALESHERBES (C. G. de L de), XIV 110;

MALESHERIES (C. G. de J. de), XIV 110 X. 74 et seg Malherbe (Flançois de), XIV. 111-poetry of, XVII. 116 Malle acid, VI. 515; IX. 758. Malk Shah, king of Peisia, XVII 437.

Malinouzky (Von), his work on insects, IX.

Malleable metals, VI 482—iron, XII 570—conversion of crude into malleable iron, XII. 552-alleged malleability of glass, X. 658.

Mallenders in the horse, XXI 578. Mallet (David), XIV. 111; XXI. 235—his epitaph on Aikman, II. 429—his allusion to Burman, V. 789.

—— (Edouart), on the population of Geneva, XV, 621, 634.

(Mr), his mortar, XI 141. (M.), on hydraulics, XII. 74.
 (PAUL HENRI), XIV. 111. MALLET-PREVOST (Henri), XIV. 112

MALLET-DUPAN (Jacques), XIV 112 Mallett (Mr), on the elevation of land in South America, XV. 167 and n. 1. Malleus, tympanal bone, III. 46.

genus of mollusks, XV. 348 Mallicoilo, island, XIV. 112; IV. 265,

266. Mallinkrot on the invention of printing, IV. 706.

Malloodoo in Borneo, V. 47.

#### MAT-MAM

Mallota, genus of insects, IX. 241.
Mallotus, genus of fishes, XII. 245—fossil, 347

Mallow, town in Cork, XIV. 112-thermal spring of, VII 372. - order of plants, V. 184.

MALMEDY, Prussian town, XIV. 112 MALMESBURY (William of), historian, XIV 112

– town in Wilts, XIV. 112. MALMO, Swedish town, XIV. 113. Malmsey wine, XXI. 885

Malo (St), French seaport, XIV 113 XIL 361.

- (C), his work on insects, XI. 11. Malojaroslawitz, battle of, X. 158 MALONE (Edmund), XIV. 113 - on the

baronets of Nova Scotia, IV 470-on Shakspeare, XX. 70, 71, 74 et seq Malpas, town in Cheshire, XIV. 113.

Malpighi (Marcello), XIV 113, 460-his anatomical discoveries, II 762-on fat, 788—on the bones, 826—on the glands, 833—on the seat of colour in the skin, VIL 223-his works on insects, IX. 3on the structure of the teeth, XVI 409 Malpighiaceæ, nat order of plants, V 186

Malplaquet, battle of, V. 451, IX 369.
MALT, XIV. 114; V 320; VIII. 48, 731quantity used in Great Britain and Ireland, V. 321; by the London breweries, 324—analysis of, ib — duty on, 321—consumption of, in England, VIII 731; Scotland, XIX 806-malting, V. 321malt-kilns, 323; XVIII. 80— excise duties on, XXI 59

Malt-dust, as manure, II. 406 Malt-liquors, adulteration of, XIV. 441.

See Ale, Been, Porter.

MALTA, XIV. 114—Lord Nelson on the importance of, V. 586—disposal of, by the treaty of Amiens, 587, 589-renewal of war with France on account of, 592, war while france on account of, 592, 595—destructive cloud in, VII 39—taken by Bonaparte, X 109—retained from him, 127—language, XIII. 210, IX 390—restored to the Kinghts of St John, XIX. 491—weights and measures, XXI, 812

- Knights of, XIII. 115, 122-ladies admitted into the order, 112-suppression of the order by Henry VIII, VIII. 705.

MALTE-BRUN, XIV 117. See Brun. Malthæa, genus of fishes, XII. 311, 312 Malthmus, genus of insects, IX 110. MALTHUS (Thomas Robert), XIV 117-

theory of population, VII. 137; XIV 441; XVIII 346, 347—on bounties on corn, VII. 379—on wealth, XVIII 211 on manufactures, 238-on the distinction between agricultural and manufacturing industry, 246—his article on Population, in this work, 338, n. 1.

Malting, V 321 MALTON, in Yorkshire, XIV. 118. Maltsters' rate of license, XIII. 435.

Malus (Etienne Louis), XIV. 118; I 901
—on chromatics, VI. 652 et seq—on
polarisation of light, I. 754, 902, II 101, XIII. 458; XVI. 537, 634, 635his other investigations and character, I 902, 903—on depolarisation of light, 902 Malvaceæ, nat. order of plants, V. 184.

Malvasia (Marquis of), his micrometer, XIV. 743

MALVERN, in Worcestershire, XIV. 119— mineral springs at, XXI. 928—railway to, 1b.

- Hills, XXI. 928. MALWAII, in Hindustan, XIV. 120—opium of, XI. 453.

MAMERS, French town, XIV. 120.

Mamertine caves, XVIII 565—prison,
XIX. 358.

Mamertines, VI. 287-Hiero's war with, XX. 900.

Mamillopora, fossil sponges, XVII. 98.

Mamilukes, then sway in Egypt, VIII. 483

et seg.; in Palestine, XVII. 197—Mohammad' Alee's massacre of the, VIII. 492, 498

# MAM-MAN

Mammæ, III 72

MAMMALIA, XIV. 121-characteristics of, II. 773, 774—sub-division of, 774—their blood-globules, 779-their bones, IIL 74, 75-muscles, 91-organs of smell, 94—eyes, 95—ears, 98—tongue, 100—teeth, 105; XVI 438—their value in classification, 477-without teeth, 438organs of voice, III 101-nervous system, 103-esophagus and stomach, 108 -intestines, 110-organs of circulation, 112-lungs, 1b -secretory organs, 113reproductive organs, 1b -luminosity of the flesh of, during decomposition, XIII 457-order of their appearance in the strata of the earth, XVII 92fossil, 156—number known, 631—distribution of, 631; of Africa, IL 217, of North America, 712.

Mammoth, XVII. 168-dentition of, XVI 474, 475.

Mammoth-cave, Kentucky, XIII. 69— blind fish in, XII 236—blind insects, XVII 630.

Man, XIV. 242-his first instruction superhuman, I 452—original complexion of, II. 121—did the race spring from one stock? 1b; VI 364-brain of (see Brain) senses of, more equally balanced than in brutes, III. 178-American races, II 676-Asiatic, III. 747-effect of climate on his active energies, II. 683-complexion, VII 222-his stature, IL 691anatomy, 771—weight of, and of his individual organs, III 2, 3—attitude and gestures, 40, 41—soul, 172, 176 his senses compared with those of brutes, 175, 176; XII 391—character of the Asiatics, III 749-varieties of man, II 775; V. 373; XI. 541-races of, IX. wherein different from brutes, V. 700—is he naturally carmivorous? VI. 244—daily labour of, VII. 464—dispersion of, VIII. 44; XVII. 536-if left to himself could never raise himself from a savage to a civilised state, I. 449, 450-Lord Kaimes, Rousseau, and Dr Doig on the savage state, VIII 90, 91 -measurement of the human body, 172 -its electricity, 571-effects of electricity on it, 601, 603-not the only animal that preys on its own kind, IX. 91whether endowed with instancts, XII 392—his position in zoological systems, XIV. 126, 128, 135; IX. 342—mechanical power of, XIV. 416, 417-his duties, to himself, XV. 565; to his fellow-creatures, 566: to God, 570-do the different varieties of the race constitute species? IX. 353, 354—his structure indicates him to be omnivorous, 768-geological date of his creation unknown, XI 540-intermixture of races and languages, XIII. 195-original unity of the families of, XVII. 536, 641-his antehistorical condition and belief illustrated by philology, 537—quantity of food required by, 658—size of the Patagonians, 335—Pritchard's Physical History of, XVIII. 512-original state of, XXI 196 -his temptation and fall, 197-source of his sinfulness, 201; consequences of, 207-the Holy Spirit's work in, 218. Sec

Anatomy, Ethnology, Physiology, &c
— (ISLE OF), XIV. 242—deemsters of,
VII. 693—yield of its lead-mines, XV. 246-language of, IX. 393.

Man-eaters, III. 269. See Cannibalism. Man-machine, in mining, XV 229. Manaar, island, XIV. 249. Managor, town in Majorca, XIV. 249 Managua, Lake of, in Nicaragua, XIV.

249; XVI. 242 Manak, in Hindustan, XIV. 249. Manakins, birds, XVI. 757.

Manatee, cetaceous animal, XIV 217 jaws and teeth of, XVI. 446, 447. - river, XI. 609.

Manatus, genus of mammalia, XIV. 218; XVI. 446.

MANAYUNK, in Pennsylvania, XIV. 249. Manby (Captain), his apparatus for saving the shipwrecked, XIII. 441.

# MAN-MAN

MANCHA (La), in Spain, XIV. 249.

MANCHE (La), in France, XIV 249. Manchester, XIV. 250—and Liverpool Railway, I 885—an ancient name for, -massacre there in 1819, V 623 -cotton manufacture, VII. 440-origin and progress of its manufactures, XIII. 178-notice of, in early times, XIV. 284 -water-works, XII 141-free library, XIII 405—mortality, XV. 614—Duke of Bridgewater's Canal, V. 367; VI. 529—canals connected with, XIII 179 police of, XVIII. 197-lectures at the Mechanics' Institution, XV 824—early newspapers of, XVI. 186; during the American war, 187—post-office statistics, XVIII 416—roof of the engine-house, Manchester station, XIX. 397-savingsbank, 668-rule for estimating horsepower in steam-engines, XX. 602. - in New Hampshire, XIV 260.

MANCHOORIA, in Asia, XIV. 260. Manco Capac, I 450, II 687; III. 128; IV 822; XV 767, XVII. 460. Mandane, VII 612

MANDAR (Michel Philippe), revolutionist, XIV 260

Mandara, in Africa, XIV. 261 Mandats, French paper currency, X, 99 MANDAVEE, in Hindustan, XIV. 261. Mandelslo, on the use of tea in Japan, XXI 89.

Mandeville (Bernard de), XIV. 261-his ethical doctrines, XV 553 and n. 2

- (Sir John de), XIV. 262. Mandibles, of bees, IV. 571—of birds, III. 85—of insects, IX. 32—of spiders, III. 373—of myriapods, XV. 747.

MANDING, or Mandingo, in Africa, XIV. 262; II 221—people of, IX. 352; XX. 50—language of, XIII 226, 227.

Mandiagora, plant, VI. 632 Mandrake, V. 202

Mandrills, in zoology, XIV 141-teeth of, XVI 456.

Mandshuria, in Asia, XIV. 260. Manducation of fishes, XII 231. MANES, XIV. 262, 264.

MANETHO, XIV. 262; XI. 368, 369, 410on Egyptian history, VIII 422 et seq two authors of that name, 452.

Manett, biographer of Dante, VII 648
Manfred (Eustacio), XIV. 263; I 715,
n. 1—on differential equations, 715 his burning-mirror, VI. 10

- king of the Two Sicilies, XIV. 262; XX. 257, 263.

AA. 207, 203.

MANPERDONIA, XIV. 263; XX. 242.

MANGALORE, XIV 263

Manganese, VI 490; XV. 66—spar, 82
—cupreous, 112—localities for, 246—black oxide of, IV 761—red, XV. 100 -ores of, in Derbyshire, VII. 755-Devonshire, 763—distribution of, XVII.

- ores, XV. 111. Manganese-epidote, XV. 85. Manganic acid, VL 490 Manganite, mineral, XV. 111. Manganocalcite, mineral, XV 100. Mangareva islands, XVIII. 282 Mange, a disease in animals, XII. 663; XXI. 578. Mangedava, in Borneo, V. 47.

Mangel-wurzel, XX. 796-culture of, II. 319; IV. 589-storing of, IL 320. See Beet.

Mangile (Prof.), on the marmot, XII. 62. Mangle, VI. 90.

Mangic, VI. 90.

Mango, fish, XI 456, 619.

— fruit, V 190—tree, in Brazil, 293;
India, XI. 454, in Sumatra, XX. 804.

Mangolia, III 731, 732.

Mangosteen, fruit, XVII 626; XX. Mangouste, in zoology, XIV. 167.

Mangrove order of plants, V. 619, 191. - tree, V. 77. Manhattan, island, XVI. 218. Manheim, XIV. 267. Mania, XIV. 529, 426.

Manica, in Africa, XIV. 264. Manichelem, XIV. 264.

# MAN-MAN

Manicola, Island, XIV. 112 Manifesto, VIII 41. Manikpur, city in Oude, XVII 17. Manus (Marcus or Caius), poet, XIV. 265—Bentley's edition of, IV 660— Sherburne's version of, XX. 106. MANILLA, XIV. 265; XIII 743, XVIL 513—captured by the British, V 466 sugar, XX. 796-tobacco, XXI 294

- hemp, XI. 311, 313, XXI. 782 Manioc, V. 206, VI. 313, XIV 716 Manis, genus of mammala, XIV. 192; XVII. 631.

Manisa, town of Asia Minor, XIV. 266 Manlii, Roman family, XIV 266 Manlius (Cheius Vulso), XIV. 266 - (MARCUS CAPITOLINUS), XIV. 266;

XIX 302, 303 - (TITUS I. TORQUATUS), XIV. 266 XIX. 303-filial piety of his son, IX. 577.

(TITUS TORQUATUS), XIV 266 Mann (Horace), on the proportion of children that should attend school, VIII 746-on education in Prussia, XV.

Manna, XIV. 266; V. 199; VIII. 47; IX. 168 XVII 421.

Manner, an index of disposition and character. I. 411.

Mannerheim (C. G), his works on insects, TX. 15. 23.

MANNERT (Conrad), XIV 267. MANNHEIM, XIV. 267-Academy of Sciences at. II 67

VI. 557. Mannite, V 73. Manning, or Manning (Robert), XIV 268, XIX. 267—quotation from, VIII.

Manometer, IV 456; XX 560. Manon, fossil sponges, XVII. 93. Manresa, Spanish town, XIV 268

Manrique (Jorge), poetry of, XVIII. 113. Mans (Le), French town, XIV. 268. Mansarde roofs, XIX. 383 Mansarowar, lake, XIV. 269. Mansart (François), XIV. 269

—— (JULES HARDOUR), XIV. 269. Mansel (Mr), on logic, XIII 571 n, et seq. - (Sir Robert), his expedition against Algiers, II. 569.

MANSFIELD, in Nottingham, XIV. 269 —— (Lord.) See Murray (William). Mansion-House, London, XIII. 677. Manslaughter, XL 604. MANSURAE, II LOWER Egypt, XIV. 269.

MANT (Richard, D.D.), XIV. 269.

MANTEGNA (Andrea), painter, XIV. 269;

XVII. 72.

MANTFIL (Gideon Algernon), geologist, XIV. 270—on the geology of Surrey, XX. 836.

MANTES, or Mantz, French town, XIV. 270—bridge at, VI. 381 Manticora, genus of insects, IX. 78.

Mantinela, XIV. 270—battle of, III. 628;

XXI 178-war with Sparta, XX. 502 Mantis, genus of insects, IX. 156. Manuspa, genus of insects, IX. 179. Mantius on surgical dressings, XX. 811. Mantle, in mollusks, XV. 344.

Mantlings, in heraldry, XI. 337. Mantshurians, language of, XIII. 217.

MANTUA, XIV. 271—Bonaparte's siege of, X 103, 105; XV. 787—surrendered to the French, 790-school of painting, XVII. 72. Mantzichierta, VII. 315.

Manua, island, XVIII. 277. MANUEL (Jacques Antoine), XIV. 271; X.

- I., Comuenus, emperor of Constantinople, XIV. 272.

- II., Palæologus, XIV. 272; VII.

Manufactories, nuisance from, XIV. 427. Manufacturers, their unfounded expectations from the repeal of the corn-laws, VII. 392-duty of the masters, XIV.

## MAN-MAR

MANUFACTURES, XIV. 272-effect of subdivision of land on, VII. 429—improved by the Crusades, 534—employment of capital in XVIII. 236-not productive of increased mortality, 238 - distingushed from agriculture and commerce, 246-of hair, XI 183-value of exports from Britain to the countries bordering on the Mediterranean, XIV 470—of England, VII. 190, VIII. 728—Denmark, 747, Greece, XI. 17; India, 458, France, X 251; of modern Egypt, VIII 447; New York, XVI. 219, 226, Russia, XIX. 544-Sheffield, XX. 96-Sweden, 862-United States, XXI 426. See other countries

Manufacturing system of political economy, XVIII 214

Manures, II 294—application of, V 98their chemical composition and mode of action, II 401-vegetable, 405-mineral, 412-animal, 407-artificial, 305-hquid 294, 297, 405, analysis of, 405—portable, 264—special, V. 99—farm-yard, II 401; V 99, VI 524, analysis of, II. 403adulteration of, 299-for gardens, XI 701 - management of, in Lombardy, XIII. 649-carefully collected in China, VI. 588-manure-distributor, II 275.

Manuscripts, where ancient MSS may be supposed to exist, XIII 383-researches for, 384-MSS in the British Museum, 391, at Oxford, 396; Cambridge, 398; Edinburgh, 401, 402, Aberdeen, 403, Dublin, 404; Paris, 407, 408; Madrid, 409, Rome, 411; Bologna, 413, Florence, 414, 415; Vienna, 417; Dresden, Berlin, 420, of the Scriptures, 837 See Libraries, Palimpsests, Papyri.

MANUZIO (Aldo Pio), printer, XIV 292his accuracy, XVIII 542-italic type invented by, 533, n

Crichton, VII. 498. junior, his friendship to

- (PAOLO), XIV. 292 MANZANARES, town in Spain, XIV. 292 Manzoni, his romance, XIX. 284.

Maori, native population of New Zealand, XVL 237; IV. 267.

Mares (Walter), XIV. 293

Maple, order of plants, V 186.

——sugar, tiee, V. 138, 186; XVII.
762—sugar, XX 796, 798.

- trees, XVII. 759, 761-XXI. 278-specific gravity of the wood, XII 89.

Maps, D'Anville's improvements on, III 289-for the blind, IV. 777-in the time of the Crusades, VII. 535-ancient, X. 466-Venetian, 472-construction and use of, 488-mode of tracing vertical sections, IV. 468-of the Ordnance Survey, XXI. 336, 337. See Geography, Projection.

Mar (Earl of), his rebellion in 1715, V. 453. district of, IL 32.

(Earl of), brother of James III XIX. 760, 761.

Marabou, bird, XVI 799.

MARACAYBO, in Venezuela, XIV. 293; XXI. 587-town taken by the bucaneers,

- lake of, XIV. 293; VII. 134; XXI 536-gulf of, XIV. 294

Maragha, or Maraga, XIV. 294. Marais, a district in Vendée in France, XXI 534.

Marajo, ısland, XII. 787. Marakah. See Dongola, New

Maraldi (J. P), astronomical labours of, III. 803-on the planets Mars and Jupiter, IV. 66, 69-on the geometric properties of bees' combs, 578.

MARANHAO, or Maranham, in Brazil, XIV 294; V 281, 299—island of, XIV. 294 Marafion, or Amazon, IL 650; XVII. 471.

Marans, French town, XIV. 294. Marantaceæ, nat order of plants, V. 211. Maraschino, in Dalmatia, VII 627. Marase, in Asiatic Turkey, XIV. 294. MARAT (Jean Paul), XIV. 294; X. 71 et seq.—assassination of, VIL 364.

## MAR-MAR

MARATHON, XIV. 295-battle of, III. 626, n, IV. 199, n, Persian forces at, III 623 and n. 4-conduct of Miltiades at, XV. 19

MARITTA (Carlo), painter, XIV 295; XVII 69

Maravedi, coin, XV 436

Marazion, town in Cornwall, XIV 295. Marbach (Dr), on circular polarization XVI 682

MARBELLA, Spanish town, XIV 296

Marble, XV 92, 154—Atheman, IV. 167, n 2—Carrara, VI 278—Kilkenny, XIII 85—Galway, X 390—Marmora, XIV. 311-Florentine, VI. 735-Doce menum marmor, VIII 78—specific gravity of, XII. 88—of Pentelicus and Paros, XI 14; XVII 619—entrochal maibles, 98, n—for building and sculptuie, 619, XIX. 842; XX 712—its tuie, 619, XIX. 842; XX 712—its strength, 717, 718—method of working it in statuary, XIX 868.

MARBLEHEAD, seaport in Essex, XIV. 296. Marburg, town in Styria, XIV. 296 - in Hesse-Cassel, XIV 296-univer-

sity of, XXI. 492 MARCANTONIO, engraver, XIV. 296. Marcard on bathing, IV. 500, 503. Marcasite, XV. 115

MARCELLIN (St), in France, XIV. 296;

MARCELLUS (M Claudius), XIV. 297-de feated by Hannibal, VI 297-decoyed and killed, 289—Syracuse captured by, XX. 900.

(M CLAUDIUS), XIV 297. (M CLAUDIUS), XIV 297. theatre of, III 476

Marcet (Bordier), his reflectors, XIII 470. (Dr), on the cold produced by sulphuret of carbon, VII 104. Marcgraaffon birds, XVI. 725.

Marcgraviaceæ, nat. order of plants, V. March, Black Agnes, countess of, VI

609. market-town in England, XIV.

298. month of, XIV. 297—gardening calendar for, XI 758

- or Morava, river, XIV. 298; IV. 312.

- of an army in war, XXI 714 MARCHAND (Prosper), XIV 298-on the origin and early progress of printing,

Marchantiacese, nat. order of plants. V 217, 145,

MARCHE, in France, XIV. 298; X. 277. MARCHENA, Spanish town, XIV. 298 MARCION, XIV. 298; X 689; XVIII. 265.

Marcionites, XIV. 298, 299.

Marcomanni, XIV 299; X. 572, 576.

Marco Polo See Polo.

Marcosians, followers of Marcus, XIV. 999

Marcotte (F.), his works on insects, IX.

MARCOUF, or Marcou (St), islets, XIV. 299. Marcus, the Heresiarch, XIV 299 Mardin, town in Turkey, XIV. 299. Mare's tail, order of plants, V. 192. Mareb, in Arabia, III. 355. Mareca, genus of birds, XVI 819.

MAREMMA, or Maremme, La, XIV. 300of Siena, III. 293

MARENGO, XIV. 300—battle of, V. 574;
X. 118; XV. 793

MARENNES, town in France, XIV 300. Marcotis (Lake), VIII 429 MARKE (Loch), XIV. 300; XIX. 794.

Mares, management of, in breeding, II. 338, 339

Marès (Léon), on rifled guns in war, XXI. 726, 727.

Maretimo, Sicilian island, XX. 246. Marcts (Samuel des), his controversy with Alting, II 634.

MARGARET of Anjou, XIV. 300, VIII 689, 690, 691

of France, XIV. 300 - the Maiden of Norway, XIX. 754.

## MAR-MAR

MARGARET, queen of Denmark, XIV. 300: VII 739

- queen of Norway, XX. 845 queen of Scotland, XIX 746, 748,

750, n 3 queen of Scotland, XIX. 765-regent, 767-marriage to the Earl of Angus, ib

Margaric acid, II, 381 Margarine, IX. 757, XVI 492 MARGARITA, Island, XIV 300—pearls of, XVII 357

Margarite, mineral, XV 79. MARGARITONE (d'Arezzo), painter, XIV. 300.

Margarodite, mineral, XV 78 Margary's method of preserving timber,

XXI 279 MARGATE, in Kent, XIV 301-population, XIII 67.

MARGHILAN, or Marginan, in Turkestan, XIV 301

Marginella genus of mollusks, XV. 384-M undulata, 385

Margraaf on alum, II. 635-on clay, V. 344

MARGRAVE, XIV. 301; IV. 515; XIII 182. Mari Rose, vessel, loss of, XX. 125, XVI. 91

MARIA ISLAND, XIV. 301 - Louisa, empress of the French, X.

153 - THERESA, XIV. 301; XVIII 652,

654-reign of, IV. 303.

- (Donna), queen of Portugal, XVIII. 390, 392.

Mariamne, XII 771.

MARIANA (John), Spanish historian, XIV. 302 Marianini on conductors of electricity,

XXI 622-on voltaic currents, 1b. MARIANNA, town in Brazil, XIV 303 MARIANNE ISLANDS, XIV. 303, XIII. 150. Marianus Scotus, XII 786 Marias (Las Ties), islands, XIV 303

MARIAZELL, town in Styria, XIV 303
Marie, a French Capuchin, first notions of photometry given by, I. 753
— Antoinette, XIV. 303, X 82

GALANTE, Island, XIV 304; XI 72
MARIE-AUX-MINES (St), French town, XIV

MARIENBERG, town in Saxony, XIV. 304. Marienburg, Prussian town, XIV. 304. Marienwerder, in West Prussia, XIV.

MARIETTA, town in Ohio, XIV. 304. Marignano, battle of, XX. 885 Marigold, XI 745, V. 113—luminosity of, 170

Marimonda, monkey, XIV. 142. Marine insurance, XII. 419, 393.

— boilers, prevention of smoke in, XX. 354, 355, 356—use of salt water in, -mechanical feeders for, 356.

barometer, IV. 457, 458; XX. 27
governors, XX. 653, 654.
vegetation, V. 229; XVII. 629. See

MARINEO, city of Naples, XIV 304. Marinei's compass See Compass.

Marines (Royal), XVI. 102, 105, 112.

Marini (M Gætano), XIV 304.

— poetry of, XVIII. 112

MARINO (San), or Sammarino, in Italy, XIV. 305.

Marinula, genus of mollusks, XV. 375. Marinus, Roman anatomist, II 752. of Tyre, X. 468.

Marion (Capt), his voyage, IV. 253.
MARIOTTE (Edme), XIV. 305-on barometrical measurements, I. 658; IV. 462 -experiments and conclusions of, L. 729—on the colours of halos, VI. 645—on hydrodynamics, XII. 70, 111; XIX. 185-on reflected heat, XL 262on the compressibility of gases, I. 958on pneumatics, XVIII. 52, n. 53-on the strength of beams, XX. 763, 764. Marischal (Lord) of Scotland, XI. 320.

College, Aberdeen, IL. 31; XXL. 480.

Maritime Alps, IL 623.

# MAR-MAR

Maritime Law, Declaration respecting, XVI. 157. - defences, XXI 701.

Maritz on casting cannon, VI 178. MARITZA, river, XIV 805; XI. 280; XVII 647.

MARIUS (Calus), XIV, 305, XIX, 319, 321 -his defeat of the Teutones, VI. 724. MARIVAUX (P. C. de Chamblain de), XIV.

307—his novels, XIX. 287 Marjoram, plant, V. 202; XI 745. MARK (St), the evangelist, XIV. 307-gos-

- (St), library of, at Venice, XIII. 417

Market-Bosworth, V. 64

— Dereham, in Norfolk, VII. 756 HARBOROUGH, in Leicestershire, XIV. 308-fair at. IX. 468

- Jew, town in Cornwall, XIV. 295 Markets, IX 468—in Liverpool, XIII 520 —London, 664—Edinburgh, VIII 405— Newcastle, XVI 169, 170-Paris, XVII. 283. See Fairs

Markham (Gervais), on the qualities of an angler, III. 147-his works on angling,

- (Mr), on the river Purus, in Peru, XVII 471

MARKINCH, in Fifeshire, XIV. 308. MARKLAND (Jeremiah), XIV. 308 Marl, XV 92, 142-its use as manure, II. 303-shell-marl, 1b-red and variega-

ted, XV. 206. MARLBOROUGH, in Wilts, XIV. 309. —— (Duke of) See Churchill (John). MARLOW (Great), in Bucks, XIV. 309

MARLOWE (Christopher), XIV. 309; XXI

Marlstone, XV. 207. Marly, aqueduct of, III, 336 MARMANDE, French town, XIV. 310.

MARMONT (A. F L Viesse de, marshal), XIV 310, X. 137 et seq , 199, 200-in Spain, XXI 824 - defeated at Salamanca, 825-on artillery, III 686-on rocks, 699

MARMONTEL (Jean François), XIV 310

-his imprisonment for libel, XIII 356 -his editorship of the Mercure, XVI 197 - on Quesnay, XVIII. 733-Tales, XIX. 288-his character of Voltalia XXI 664

MARMORA, Sea of, XIV. 311
MARMORICE, or Marmaras, in Anatolia, XIV 311.

Marmosets, dentition of, XVI 455 Marmot, XIV. 179-its hybernation, III.

180, XIL 62 MARNE, river, XIV. 311—departments of France, ib, 312—wines of, XXI. 883.

MARNOCH, in Banifshire, XIV. 312. Marobia, atmospheric phenomenon in Sicily, XX. 246

Marobodus, X. 576 Marocco, II 223 See Morocco. Marone-colour, dyeing of, VIII 314. MARONITES, XIV 312; XX. 909. MAROONS, V 557; XIL 673 MAROS, Or MAROSCH, EVER, XIV. 313; XII.

MAROS-VASARHELY, in Transylvania, XIV 313.

MAROT (Clement), XIV. 313-his translation of the Psalms, XIL 190-poetry of,

XVIII 116. MAROWINE, or Maroni, river, XIV. 313. Marphysa, genus of annelides, XI. 298.

MARPURG (F. Wilhelm), XIV. 313. Marque (letters of), II 146 MARQUESAS, Islands, XIV. 313; XVIII.

Marques, or Marquess, title, XIV. 314coronet of a, XI. 886

Marr, II 32—earl of, V. 453 Marracci (Ludovico), XIV. 814. Marrast (Armand), XIV 314; X. 232,

238. MARRIAGE, XIV. 314-marriage customs in Abyssinia, II 57—in North America, 681—Arabia, III. 353—Asia, 750—Babylonia, IV. 346-Cardiganshire, VI. 234 — ancient Germany, 606; X. 573— Dahomey, VII. 620—Circassia, VI. 730

MAR-MAR -Egypt, ancient, VIII. 440; modern,

446—Hindustan, XI. 473—Japan, XII -Siam, XX. 233 - aborigines of Australia, IV. 259 - conducting the bride home, V. 347—encouraged by the Romans, VI 362-concubinage, VII 229-proportion of marriages to the population in England, 755—English law of, XII 50, VIII. 781—Scotch law of, XII 51-in what light regarded by Catholics and Protestants, VIII. 69 impediments to, by the Roman Catholic church, 68, n—as a basis of law, XIII 256—in relation to medical jurisprudence, XIV 425-nubile age, ib -circumstances invalidating, 1b—irregular, at Gretna Green, XI. 61; and in Berwickshire, IV 681-needs no encouragement, XIV 441-number registered in England, VIII 755, in Scotland, XIX. 800-annual rate per cent of, in England, XV. 649-duties relating to, 568 -prudential restraint on, a check to over-population, XVIII 346-dependence of marriages on deaths, 348portion of births to marriages, 852proportion of those born in England living to marry, 354-prolificness of marriages in England, ib -effect of the absence of prudential restraint, 356registration of, 831 See Bigamy, Celibacy, Divorce, Polygamy.

Marriage-act, Royal, V 474
Marriage feast, parable of the, I. 522, a. Marrow, II, 788, 828,

- of Modern Divinity, XVIII. 497 and n 2.

- vegetable, plant, V. 193; XL 736 MARRUCINI, Italian people, XIV. 314. MARRYAT (Frederick), captain, XIV 314his code of signals, XX. 25.

Mrs, god of war, XIV. 314

— planet, IV. 66, 90—phenomena of,

52-parallax of, 62-atmosphere of, 67 —physical peculiarities, 90—Kepler on its motions, III. 799—variations of its orbit, IV 107

Marsais (Cesar Chesneau du), XIV 315 —on the alphabet, II. 616

MARSALA, in Sicily, XIV. 315; XX. 245wine, 248, XXI. 886.

MARSDEN (William), XIV 315—on the cannibalism of the Battas, III 270—on edible birds-nests, IV. 727-on the language of the Gypsies, XI. 172.

Marseille, French city, XIV. 316— Greek colony at, VIII. 184—water-works of, III 386—population, X. 277 epidemic small-pox at, XXI. 501. See Massilia.

Marseillois, X. 68, 69.
Marse (Dr Heibert), bishop, XIV. 317. (Mr), his improvements on the

electro-dynamic cylinder, XXI. 639, 640. - See Maishes. gas, VI. 506.

Marsh's hbrary, Dublin, XIII. 405 - process for detecting arsenic, VI 495

MARSHAL, or Mareschal, XIV. 317—chief of Herald's College, XI. 320—in the

Admiralty, II. 147 Marshall (E S), his gold-leaf, X. 703 - (Mr), on the mortality of London.

and Co's cloth works, XIII. 313. Marshall's Islands, XVIII. 270. Marshalling arms, in heraldry, XI. 339.

Marshalsea, Court of, XL 774. MARSHAM (Sir John), chronologist, XIV. 318.

- (Thomas), his work on insects, IX. 4.

Marshes, reclamation of, II. 363effect on health, IV. 184; XIV 444plants of, V. 221.

MARSHEIELD, town in Gloucester, XIV.

MARSHMAN (Joshua, DD.) missionary, XIV. 318 -on the Chinese language VI. 558, 571-his Clavis Sinica, 577

MAR-MAR

Marshy soil, effects of, on timber tices, XXI 268, 269. Marsi, Italian tribe, XIV. 318. Marsieul, his work on insects, IX 24

Marsigli (Luigi Ferdinando, count), XIV Marsileaceæ, nat order of plants, V. 216

-reproductive organs of, 144. Marsilli on birds, XVI 726 Marsipobranchii, sub-order of fishes, XII

228. MARSIVAN, or Marsovan, in Asiatic Tur-

key, XIV 319.

Marsland (Peter), his improvement of the steam-loom, VII 451

Marston (John), poet, XIV. 319. Marston-moor, battle of, V 405. VII 511 Marsupialia, order of mammalia, XIV. 173, 136; XVII 631 -- bones of their pelvis, III 80-their pouch, 113-dentition, XVI 447-order of their appearance in the strata of the earth, XVII. 92-of America, II. 713-Australia, IV. 260; fossil in, XVII 638, 174, 175.

Marsupites, fossil echinoderms, XVII 98 MARTA, OF MARTHA SANTA, IN NEW Granada, XIV. 319, IV 818

MARTABAN, XIV 319, XVII 367 Martel (Charles), X. 6 Marten, in zoology, XIV 157-fur of, X 347.

Martensen, on the attributes of God, XXI 189, 192,

Martens, on public rights, XVI. 157, n MARTIALIS (M. Valerius), Latin poet, XIV. 319

Martignae ministry, in France, X. 195.

MARTIGUES, French town, XIV 320 MARTIN (Benjamin), XIV. 320-on solar microscopes, 790

- (DAVID), divine, XIV 320. (Gabriel), on the classification of

books, IV. 715 - (General San), IV 832, VI. 553; XVII. 467.

(J), his entomological works, IX 8 (JOHN), painter, XIV 321

(Louis-Aimé), XIV. 320. (Louis-Claude de Saint), XIV 321

(St), island, XIV. 322; XI. 72 bird, XVI 758—anecdote of a combination of martins against a sparrow, V 704.

Martin's (St) Place, Savings-Bank, London, XIX. 667.

- graphical perspective, XXI 120. Martine (Dr), on heat, I 758 and n Martineau (Miss), deception in a case of alleged clairvoyance related by, XX. 439

Martinet on birds, XVL 729. Martingal, XI. 683

Martini (Giovanni Battista), musician, XIV. 322; XV. 729

(G. H), on the dials of the ancients, VIL 773.

MARTINIQUE, island, XIV 322-long infested by ants, III. 361-bird-catching spider of, 377.

MARTINUS, bishop of Tours, XIV. 322. Martite, mineral, XV 108 Martlet, in heraldry, XV. 326.

Marros, town of Spain, XIV 323. - (IVAN PETROVICE), sculptor, XIV.

MARTYN (Henry), missionary, XIV. 323. —— (John), botanist, VI 408 MARTYR, XIV. 323—era of martyrs, VI. 672.

(Justin), IX. 491. ---- (PETER), XIV. 324. MARTYROLOGY, XIV 324.

Marucellian library, XIII. 415. Marum (Van), his electrical machine, VIII. 538-on the electricity of melted bodies. 565.

Marvel of Peru, order of plants, V. 203. MARVELL (Andrew), XIV. 324. Marwar, in Hindustan, XIV. 325; XIII.

Mary, seven persons of this name mentioned in Scripture, XIV. 325.

## MAR-MAS

Many or Miriam, sister of Aaron and Moses, XIV. 325

- mother of Jesus, XIV. 325-worship of, XII 750, XI, 36, I 514-immaculate conception of, VII 228, XII. 365-seldom mentioned in Scripture, and in such a way as to repress superstitious veneration, I 515

- sister of Martha, XIV 329. mother of James and Joses, XIV. 229

- mother of John Mark, XIV 329. a pious Christian, XIV 329.

consort of William III of England, XIV 329, V. 439-her death, 445 - queen of England, XIV. 329, VIII. -marriage to Philip of Spain, 709death and character, 711-execution of Cranmer, VII 484—her navy, XVI 92 -her designs against the Irish Protestants frustrated by a curious occui-

rence, XVIII 829 - queen of Scots, XIV 329; XIX. 775, et seq—Buchanan her tutoi, V. 717—criminality of, ib—Chalmers' Life of, VI 402-Edinburgh in the reign of, VIII 391-Elizabeth's treatment of, 711, 637—Lang's dissertation on her guilt, XIII 158—Bishop Lesley's senvices to, 343-John Knox's interviews with, 127-her visit to Glasgow, X. 646 -colour of her hair, XIX. 231, n 1-Robertson's account of, 230-her residence at Sheffield, XX. 95-Gilbert Stuart's History of, 783-Wm Tytler's Inquiry into the Evidence against her. XXL 410-P F. Tytler, on her portraits, 415-Whitaker's Vindication of, 851.

– Magdalene, XIV. 328 of Guise, XI 90, XIX. 773—her regency in Scotland, 778 et seq. - (St), island, IV 336.

- (St), island and cape, in Gambia, X. 393, 394.

Mary's (St), Loch, XIX. 790; XX 41 - College, St Andrews, XXI 478, 474 MARYBOROUGH, in Queen's county, XIV. 329; XVIII 730

MARYLAND, XIV. 330; XXI 419-debt of, 428-first settlers in, 433-wine of, 888 Marylebone, XIII. 660-cricket club of, VIL 510

MARYPORT, in Cumberland, XIV. 331; VII. 577 MARYSVILLE, in California, XIV. 332.

Masaccio, painter, XIV. 332. Masaniello, XIV 332, XX. 259 Masarides, tribe of insects, IX 196 Masaris, genus of insects, IX. 196. Masaya, in Nicaragua, XVI. 244. MASBATE, Island, XIV 333.

Mascagnine, mineral, XV. 99. Mascagni on the lymphatics, II. 766, 803on adipose tissue, 788 - on erectile tissue, 800-on exhalation, 802-on the cavernous bodies of the urethra, 800on lymphatic glands, 805-on the villi of the ileum, III. 61.

MASCALI NUOVO, town in Sicily, XIV. 333. Mascara, town of Algeria, XIV. 333. Mascat, III 360. See Muscat.

Maschek, on the strength of men and animals, XIV. 416.

MASCHERONI (Lorenzo), mathematician, XIV. 333: L 701.

Mascle, in heraldry, XI. 830 and n. Masculine, in grammar, X. 747.

MASERES (Baron), XIV. 384 - services rendered to science by, I. 709, n. 1-on annuties, III. 222; XII 400.

Masham, in Yorkshire, XIV. 834. (Mrs), XI 229; III. 217.

Mashing, in brewing, V. 325-in distillation, VIII. 48-mash-tun, V. 325-mashing machine, 339-Mr Tizard's method of, 325.

Mashwort, plant esteemed by the Druids, VIIL 188

Masinissa, Numidian prince, XIV. 384; VI. 299; XVI. 350.

MASKELYNE (Nevil), astronomer, XIV. 204; I. 833-his observations and improvements at Greenwich, ib, 835-his lunar

#### MAS-MAS

observations, 833—his nautical almanack, 834, II. 598; III. 814—on the attraction of mountains, I. 834—his observations on Schehallien, ib.; III 807 -his catalogue of stars, IV. 80-De-lambie's eloge on, VII 703-his astronomical labours, III. 806-his correction of Mayer's lunar tables, XIII. 687—his micrometers, XIV 748, 750

Masks used by Greek actors, VIII. 135, 139-by Roman actors, 142-man of the iron-mask, IX. 495, XVIII 567.

Mason (Charles), his astronomical observations, XIV 336; IX. 550.

- (WILLIAM), poet, XIV. 336-his hymns, XII. 189

- engraver, VIII 809. Mason's improvements on Mayer's lunar

tables, III 811. Mason-bec, IX. 199.

Mason-lodge, at Kilwinning, XIII 88;

Masonite, mineral, XV. 78.

Masoney, XIV. 336; V 737—application
of statical principles to, I 870

Masons, V 737—diseases of, XIV. 442. - (FREE), XIV. 336

Masona, term in Jewish theology, XIV. 339, XIX. 834, 835 Masoretic points, XIII. 209—Capellus on, VI. 206-Kennicott on, XIII 63

MASQUERADE, XIV. 339
Mass, in the Romish Church, XIV. 339, I. 513; XVIII 336-mass of the pre-

sanctified, XIV. 339. Massa (Nicolaus), II. 761.

Massa di Carrara, town in Italy, XIV 339. Massaccio, painter, XVII. 62.

MASSACHUSETTS, XIV 839; XXI 419 mortality in, 421—debt of, 428—colo-nization of, 432—wine of, 888—Spy newspaper, XVI. 193—number of newspapers published in, 194-education in, XV. 820

Massafra, town in Naples, XIV, 342. MASSAROONY, river in British Guiana, XIV.

Massena (André), marshal, XIV. 342; X. 99, 100 et seq, 178, V. 608—his operations in Portugal, XVIII 388—Spain, XXI, 823-his disgrace, 824

Massey, his sounding apparatus, XX. 26. Massicot, IV. 497.

Massieu (John), deaf and dumb boy, VII

MASSILIA, XIV. 343, 316 - coinage of XVI. 861.

– planet, IV. 91

Massillon (Jean Baptiste), XIV. 343-compared with Bourdaloue, V. 249.

— town in Oho, XIV. 344

Massinger (Philip), XIV. 344—his dramatic works, VIII. 159—some of them derived from Bandello's novels, IV. 411 -Gifford's edition of his works, X. 622.

Massman (Dr), on ancient waxen tablets XVII. 207, n—portions of Scripture from palimpsests, published by, 209
Massospondylus, fossil reptiles, XVII 152.

Massouan, town in Abyssinia, XIV. 345trade of, XVIII, 819.

Mastacembelus, genus of fishes, XII. 292 MASTER AND SERVANT, XIV. 345—duties of, XV 569; of master manufacturers, XIV. 280

- in the navy, XVI 104.
- of the household, XL 774-of the

horse, 776. Master-keys, XIII. 541.

Master-singers of Germany, poetry of, XVIII 118

MASTIC, or Mastich, XIV. 350; V. 190; VI. 368; XIX. 88; XX. 715. Mastication, XVII. 658. Mastiff, XI. 763.

Mastigias, Egyptian deity, XL 886 Mastigophorus, fossil cuttle-fish, XVII.

Mastigus, genus of insects, IX. 113.

Mastodon, XVII. 167, 168, 637 and n. 2—
dentition of, XVII. 472, 473—in New : York, 216.

#### MAS-MAT

Mastodonsaurus, fossil reptiles, XVIL 137, 138

Mastord cells of the ear, III 46
Masts, building of, VI. 262—position of, XX. 159

MASULIPATAM, in Hindustan, XIV. 351calicoes manufactured at, VII. 439 Ma-t, Egyptian deity, VIII 437. Matamata, a species of turtle, XIX. 21

MATAMORAS, Or Matamoros, in Mexico, XIV. 351, 728.

Matan, island, XIV 351 Matanzas, in Cuba, XIV. 351. Mataquito, river in Chile, VI 543 MATARO, town in Spain, XIV 351. MATCHES, XIV 351.

MATCHIN, Turkish town, XIV 352 Mate, South American tea, V. 199; XVII 268, 629; XXI. 83

MATELICA, town of Italy, XIV 352 MATERA, town of Naples, XIV 353 MATERIA MEDICA, XIV 353, 463 Medicine

MATERIALISM, XIV 353—opposed by Leibnitz, I 128—taught by Epicurus, III 308—Robert Hall's notions of, XI 191 Materialists, I 57-fallacy of their reasonıng, 58

Mathematical Geography, X. 479.

theory of heat, I. 946, of electricity, 987; of magnetism, 994; of the propagation of sound, 891

- theories of thought, XIII 577, n Mathematicians, ancient, XX 300.

MATHEMATICS, XIV 353-ancient works on, preserved in religious establishments during the dark ages, I 550—language of, must always consist of two parts, 561-abstract, II 52-Aristotle on, III 541, 550—formula in, IX. 787—mode of teaching the blind, IV 777—pure, I 804, 806-connection between mathematics and natural philosophy, 805-Fourier's writings on, 951-cumbrous character of the literature of, 804 and n. 2-their progress in this country, 806-their application to medicine, XIV. 461-necessary mathematical judgments, 595, 596 -knowledge of among the Persians, XVII 430-first application of mathematical calculation to naval architecture. XX. 130-knowledge of, desirable for the study of theology, XXI. 182 See Geometry, &c.

Matheot's (Mr), process of engraving, XXI 636

MATHER (Cotton, D D.), XIV. 354 - Dixon, & Co., their steam-engines,

- (INCREASE, D.D.), XIV. 354 Matheson (Sir James), his improvements in Lewis, XIII 352

Mathews (Charles), comedian, XIV. 354. Mathison (G F.), his refinery, VII. 81. Mathos, VI. 291, 292.

Mathulen of Lyon, on the quadrature of the circle, XX. 522.

Matilda, queen of England, VIII. 671 MATINA, in Costa Rica, XIV. 355. MATLOCK, in Derbyshire, XIV. 355 springs at, VII. 755—dale, 754 Matlockite, mineral, XV. 105. Matriculation, in universities, XXI. 457 et

Matrona, name of Juno, XIII. 20. Marsys (Quintin), painter, XIV. 355.

Mattarah, or Mattrah, Arabian town, III. Mattathias, Jewish patriot, XII. 769. Matter (Stanislao), XIV. 355.

Matter, divisibility of, VI 443; VIII 66 -four primary elements of, according to the Greeks, IV 448-early opinions on the constitution of, I 935. Idealism, Materialism.

Matteucci, on animal electricity, I 961; VIII. 571—on the electricity of the solar rays, 569—electric fishes, 577—his theory of hall, 586; and of sheet lightning, 587-his phosphorus electrometer, 622-on thermo-electricity, XXI. 655. Matthaei on recension of the text of New

Testament, XIX. 836.

## MAT-MAX

Mattheson on Handel, XI. 206. Matthew de Gradibus, IL 756.

of Westminster, XIV 357. - (St), evangelist, XIV. 355-Gospel of. 356.

- (St), island, XIV. 357 Matthew's Bible, IV. 702. Matthias (Anabaptist), II. 742 Matthiessen (Mr), on diamagnetism, XIV.

MATTHISSON (Frederic von), poet, XIV 357. MATTO GROSSO, in Brazil, XIV. 357. Mattresses, floating, XIII 440
Maturin (Charles Robert), XIV. 358—his

Montorio, XIX. 277-sum paid for his tragedy of Bertram, XXI. 173 MATY (Matthew, M D), XIV 358 MAUBEUGE, town in France, XIV 358 MAUCH CHUNK, in Pennsylvania, XIV 358. MAUCHLINE, in Ayrshue, XIV 358

Mand, daughter of Henry I, VIII 671 Mandslay and Field, their marine steamengines, XX 639.

Mauduit on birds, XVI 729

- on the springs in the plain of Troy, XXL 357

Maui, island, XVIII 270. MAULE, river and province in Chile, XIV 359; VI 543, 547

MAUMEE, river, XIV 359 MAUNDAY THURSDAY, XIV. 359. Maupeouana, II 739.

MAUPERTUIS (P L M. de), XIV. 359-the first emment mathematician who taught the Newtonian philosophy in France, L. 603-on the laws of motion, VIII. 343 -on the length of the degree, IX. 549 -on refraction, 517-on the political economy of France as due to England. XVIII 220, n 3.

MAURETANIA, XIV 360; XV. 596; II. 566. Maurice, of Nassau (Count), his adminis-tration in Brazil, V. 282

OF NASSAU, Prince of Orange, XIV. 361; XL 571 et seq.

(St), knights of, II 645.
(THOMAS), XIV. 381.
Mauriceau (Fiancis), on midwifery, XIV.

Mauricius (F Tiberius), emperor of Constantinople, XIV 361.
MAURITIUS, XIV. 362, II. 229

in, XX. 323, 327—sugars of, 795, 796 weights and measures of, XXI, 812. MAURO (Fra), cosmographer, XIV 364.

MAUROLYCO, or Maurolycus (Francis), XIV 365—his contributions to mathematics, I 552—distinguished for his skill in optics, 624—formed a right judgment of the defects of short-sighted and long-sighted eyes, ib .-- explained why light admitted through a hole of any shape, and received upon a plane, always illuminates a round space, and through a large one, a space the shape of the aperture, ib -nearly discovered the functions of the different parts of the eye, 1b .- supposed that light acquires colour by refraction in passing through the water-drop of the rainbow,

ib.—on optics, XIII 449; XVI. 525 Maury (Capt), on spider lines for telescopes, XIV. 744, n. 2

(JEAN SIFFREIN), cardinal, XIV.

— (Lieut.), his works on physical geography, XVII. 572—on the superiority of fish for food when found in the colder seas, 635—on the currents of the Polar regions, XVIII. 176—his charts, XX. 26.

MAUSOLEUM, XIV. 365 — origin of the name, III. 680; XIX. 857—of Adrian, III. 473—of Augustus, ib Mausolus, king of Caria, III. 680; XIX.

857.

Mavrocordato, XI. 24, 26 et seg. Maxence, centre employed for the bridge of, VI 377. MAXENTIUS (M. A. Valerius), Roman em-

peror, XIV. 366; XIX. 351. Maxillæ, in birds, III. 85—crustacea, VII. 538-insects, IX. 32.

## MAX-MAZ

MAXIMIANUS (G. Valerius), Roman emperor, XIV 366, XIX. 351 - (M. A. VALERIUS), Roman emperor,

XIV. 366, XIX. 350. Maximilian I, emperor, IV. 302.

MAXIMINUS (C. J Verus), Roman emperor,

XIV. 366, XIX 348.

(G. VALERIUS), Roman empelor, XIV 366; XIX 352

MAXIMUS, the Confessor, XIV. 366.

(M CLEMENS), Roman emperor, XIV. 366, VII. 310.

(Petronius), Roman emperor, XIV. 366

(TYRANNUS), Roman emperor, XIV.

Maxtlaton, Mexican king, XIV. 701 Maxwell (Clerk), on 10ling curves, XIV. 392—his platometer, 415—on agriculture, II. 262

- (John, DD), IV. 373, n. - (John), of Munches, on the condition of the peasantry in Kirkeud-bright in 1720, XIII. 99.

of Gribtown, trial of, XIII. 23. on electrical fishes, VIII. 577.

- (W H), on deer-stalking, XX 212. MAXWELLTOWN, in Kirkcudbrightshine,

May, month of, XIV 367-gaidening ope-1 ations in, XI 759

apple, plant, V. 180 (ISLE OF), XIV 367; IX 795-dioptric lights of, XIII. 475; Report of the

Royal Society on, ib.

(Thomas), poet, XIV. 367.

May-bag. See Cockchafer:

May-Day, XIV 367 — May-games, XV.

598, 599, May-files, their use in angling, III. 149. Maya language, XIII. 223 Mayacacete, nat. order of plants, V. 213.

MAYBOLE, town in Ayrshue, XIV. 367. MAYEN, in Rhenish Prussia, XIV. 367.

MAYENCE, in Rhenish-Hesse, XIV. 368; XI 363—early printing at, IV 706, 708; XVIII. 527.

MAYENNE, in France, XIV 368 - river in France, XIV 369.

MAYER (Tobias), XIV 369—his lunar tables, I 695, 781, 814, 833; III. 811; XIII 687; XIV. 335—changed the sextant into a cucle, and produced the repeating-circle, I 749—his dippingneedle, XIV 85-on magnetism, 5his rule for calculating mean temperature, VI. 768-his catalogue of stars, IV. 80-on the proper motion of the stars, I 846.

- (Frederic-Christian), on the anthmetac of sines, II 547

- (John), of Hamburg, on anonymous books, IV. 711.

on the nerves, II 806, 807. on the dynamical theory of heat.

Mayhew (Henry), his work on London, XIII. 674—on the London fish-market, IX. 649; VIII. 728 Mayhill group of rocks, XV. 197

Maynard (George), on binocular vision, XX. 685.

MATNOOTH, XIV 369—College, XII. 533
MAYO, Irish county, XIV. 369—agricultural statistics, XII. 516, 517.

(John), his long beard, IV 528. (Mr), on the nerves, II. 814.

on animal magnetism, XX. 432. MAYOMBA, Ol Mayumba, African scaport. XIV 372.

Mayor, Lord, of London, XIII. 677. MAYOTTA, island, XIV. 372.

Mayow, or Mayo (John), XIV. 372, 460; II. 761-his chemical discoveries, IV. 566 MAYPU, nver in Chili, XIV. 372; VI 458. MAYSVILLE, in Kentucky, XIV. 372; XIII.

70. MAZAMET, French town, XIV. 372. MAZANDERAUN, in Porsia, XIV. 872; XVIL 421, 428-silk produced in, 424.

#### MAZ-MEC

MAZARIN (Jules), XIV. 373; X. 34-Colbert's connection with, VII. 97—his enmity to the Prince of Condé, VII. 232, 233.

Mazarine library, XIII 408 Mazaruni, river in British Guiana, XIV. 342

Mazeas (Abbé), on atmospheric electricity. 660-on the colours of mixed plates, XVI 623.

MAZEPPA (John), hetman of the Cossacks, XIV 374: VII. 423: XIX. 479

MAZZARA, seaport in Sicily, XIV 374, XX. 246-atmospheric phenomena near, ib Mazzıni, XII 658.

MAZZOCCHI (Alessio Simmaco), XIV. 374. Mazzoni, VII 499

MAZZUCHELLI (Conte G Maria), XIV 374 MEAD (Dr Richard), XIV. 374, 462-controversy arising out of a work by, XX. 813. n. 1.

a beverage, IX. 765—used by the Anglo-Saxons, VIII. 666—the drink of defied heroes, XV 767 MEADAY, town in India, XIV 375

Meadow, irrigation of meadows, IL 326, XII 611; XIII 648, 649

- plants, V. 221 Meadows (General), XI. 498. Meal, mountain, mineral, XV. 70. Meals, posture of the Greeks and Romans at, II. 80-number of daily, and intervals between, IX 768

Mealy Mountains, XIII. 139 Meanwood church, clock of, VII 19, 20 Mearns, Scotch county, XIII. 89. See

Kincardineshire Measure, in music, XV. 717.

Measurement of brick-work, V 736 stone-walling, 740 — plasterers' work, 745 — slaters' work, 746 — carpenters' work, 749-joiners' work, 753bers' work, 756—of the human figure, VIII. 172—of timber, XXI 280. See Barometrical Measurement, Mensuration, Tonnage, Trigonometrical Survey MEASURES, XIV. 375—tables of, III 584

XXI. 804 et seq, 808—Dr Cumberland on Jewish, VII. 580—Egyptian, VIII 517—foreign land, II 115—proposals for a new system of, VII. 702, 230— Roman foot, 280—French, X. 284. See Weights and Measures

Measuring Machines, XIV. 414 Meat, modes of preserving, IX. 767-preserved meats for the navy, XX 24. MEATH, Irish county, XIV. 375—agricultural statistics, XII. 515, 517.

MEAUX, French town, XIV. 378. Mecastor, oath, VIII. 370.

MECCA, XIV 378-taken by the Wahabys, III. 364, 366-recaptured by the Turks, ib.—various notices of, 364, 365—taken by Mahommed, XV. 300—caravans of pilgrims to, VI. 230-cabaa, or black stone of, probably an ærolite, I. 459balsam of, IV. 401-fair at, IX. 469.

MECHAIN (P. F André), XIV. 379, L. 775, -measurement of an arc of meridian by, 886, 337; VII. 702; IX. 551

Mechanical arts, I 801-their connection with physical science, 807-inventions in, presume a knowledge of physical laws, 808-what constitutes a mechani-

laws, soc—what constitutes a model of cal philosopher, ib.

notation, I. 880.
power—electro-magnetism applied as a, XXI. 643. See Mcchanics.

rocks, XV. 180, 180, 141.

Mechanicians, ancient, X. 501.

MECHANICS, XIV 380 - small progress made in the science before the end of sixteenth century, I. 590—state of, in the seventeenth century, 865—Guido Ubaldi, 590-Stevinus, ib-revolution effected by Galileo, 591—Torricelli, 593 — Descartes, ib — Hooke, 595 — Huygens, ib -principle of virtual velocities enunciated, 651 - Varignon's Projet d'une Nouvelle Mécanique, 651, 652-Newton's Principle, 652—improvements by Leibnitz, ib.—force of a moving body estimated by Descartes and Leib-

## MEC-MED

nitz, 654-controversy which ensued, -principles relative to the force of moving bodies, 656-controversy as to the vis viia, 657-problems solved in the times of Newton and Leibnitz, 658 -contributions of Halley, 658, 659 James Watt, 865-state of, in the seventeenth century, ib—philosophical spirit infused into practical mechanics by Watt, 866-Robison, 870; his Mechanical Philosophy, 872; XIX 239—Coulomb, I 873—Young, 874—mechanical properties of solids, ib -Young's mechanical writings, 875-Robert Stephenson, 876-Sir Marc Isambart Brunel, 878 — self-acting machinery, ib — impulse given to mechanics by the success of the block-machinery, 879 - Trevithick, 882-George Stephenson, 883-Poinsot's statical couples, 825-Poisson's treatise on, ib.—electro-magnetism as a prime mover, 987-discoveries in, by Galileo, X 381-knowledge of, in ancient Egypt, VIII 442; among the Druids, 187; in China, VI. 586 See Carpentry, Dynamics, Lever, Rotation, Statistics, Strength of Materials, Weighing Machines.

Mechanics, animal, XIV 461.

- Institutions, importance of, VII. 457-at Manchester, XIV. 259; XV 824—statistics of, for the United Kingdom, 825—Glasgow, X. 652—Leeds, XIII 314.

Mechanism, pure, XIV. 384-elementary combinations in, 390-trains of, 400, 404-forces applied to, 403.

MECHLIN, town in Belgium, XIV 418steeple of, III. 411-lace, XIII. 142, 143

MECHOAGAN, in Mexico, XIV. 419, 724, 718. Meckel (Albert), on the lymphatics, II.

- (Johann Friedreich), XIV 419his anatomical labours, II 765—his Manual, 767; III. 73—on the veins, II. 767, 793—on the lymphatics, 804.

MECKLENBURG, in Northern Germany, XIV 419—weights and measures, XXI 812

(Princess Anne of), XIX 482. SCHWERIN, XIV 419. STRELITZ, XIV 419.

Meconic acid, its poisonous quality, XIV.

Medallions, Roman, XVI. 384
MEDALS, XIV 420—taking casts of, VI.

325-curious means of preserving, XXI. 504—method of copying by electricity, 635—Vaillant on, 504—Academy of Medals and Inscriptions at Paris, II. 69. See Numismatics.

MEDE (Joseph), XIV 420—on the allusions

to a future state by the Old Testament prophets, I. 474.

MEDEA, XIV. 420.

Medeenet-Haboo, antiquities at, VIII 510, 462.

MEDELLIN, in New Granada, XIV 420. Medeterus, genus of msects, IX. 243 MEDGYES, or Mediasch, in Transylvania, XIV. 420.

MEDIA, XIV 420-monarchy, XV. 413. Median language, XIII. 200, 208.

Mediæval history and historians, XI. 542, 543, 548-coins, XVI. 385-roofs, XIX See Middle Ages. Medical academies, IL 62; and societies,

XIV 461. electricity, VIII 603

JURISPRUDENCE, XIV. 422, 463. men, influence of their profession

on their health, XIV. 442.

 Missionary Society, XV. 278.
 officers, naval, XVI. 112, 114. police, XIV 440.

profession, XIV. 450. schools, in United Kingdom, XIV of United States, XXL 493

Mediceo-Laurentian Library, XIII. 414; XIV. 447.

MEDICI, family of, XIV. 445, XII. 651; XXI. 897, 898 — their patronage of

## MED-MEG

science and art, XIV. 458; XVII 62, XIX. 861, 862.

Medici (Cosmo de), XIV. 446; XIII. 414 — (Lorenzo de), XIV. 447, 459 — Roscoe's Life of, XIII 444, XIX. 417.

Roscoe's Life of, XIII 444, XIX 417.
—— (Maria di), XIX 181, 162
Medicinal foods, XIX 611.
Medicinal foods, XIX 611.
Medicinal foods, XIX 612.
Medicinal foods, Augustian foods, in Turkey, III. 659 and n 2-knowledge of, in ancient Egypt, VIII. 442, in China, VI 585, among the Druids, VIII. 188, m Russia, XIX. 535nacters of abbreviations in, VI 419-improved by the Crusades, VII 535employment of electricity in, VIII. 603 -of chloroform, VI. 629 - medicines distinguished from aliments and poisons III 179—alterative medicines, II 633—ignorance of, in Persia, XVII 430 active poisons form the best, XVIII. 135-serpents formerly used in, XIX. 49—distinguished from surgery, XX 809—Edinburgh School of, XXI 484 See Disease, Health, Physic, Physiology, Vetermary Science.

MEDINA, or El Medinah, in Arabia, XIV 467-various notices of, III 355 et seq taken by the Wahabys, 364-recaptured by the Turks, 1b

- DEL CAMPO, XIV 468 - DEL RIO SECO, town in Spain, XIV.

group of rocks, XV 199 (Pedro de), his Treatise on Navigation, XVL 3

- river in Isle of Wight, XXI. 861 SIDONIA, town in Spain, XIV 468. Sidonia (Duke of), XVIII. 384-

commander of the Spanish Armada, VIII 713

MEDIOLANUM, XIV 468.

MEDITERRANEAN SEA, XIV. 469; IX. 385evapolation of, XVII 573-saltness of, 574-Ptolemy on the, X. 467-springs or fresh water m, XVII 574—railway and proposed canals between it and the Red Sea, XX 430, VIII 430.

Mediar, V. 101; XVII 763—culture of, XI. 716.

MEDOC, in France, XIV 471.

Medulla oblongata, XVII. 558, 668, 669, 674, 699,

spinalis, XVII. 558.

Medullary sheath and rays of plants, V. 81, 82.

- tassue of animals, III. 171. - membrane of bones, II 828. MEDUSA, Golgon, XIV. 471; X. 717; XVII. 418.

- genus of zoophytes, XXI. 996, 997 Medusidæ, XXI. 995, 996, 1006—their phosphorescent properties, 998, and n. 2 -in the Greenland Sea, XI. 43.

MEDWAY, river, XIV. 471; XIII. 65, VIII. 716.

Meeanahs, VII. 598 MEEANEE, Indian town, XIV. 471.

Meer Cossim, XI 146, 147. - Jaffler, XI. 484, 487.

MEERMAN (Gerard), XIV. 471-his work entitled Origines Typographics, IV. 706. —— (Jan), XIV 471.

Meerschaum, mineral, XV. 84—pipe-bowls made of, XVII. 480—clay exported from

Turkey, XXI. 384. MEERUT, in Hindustan, XIV. 471; XVI. 301; XVII 480—outbreak of the mutiny of 1857 at, XVI. 302.

Megacephala, genus of insects, IX. 78. Megacephali, family of insects, IX. 242. Megaceros, XVII. 170—teeth of, XVI

Megachile, genus of insects, IX. 199. Megachirus, fossil shrimp, XVII. 102. Megacles, IV. 195 Megaderma, genus of mammalia, XIV.

Megaderus, genus of insects, IX. 144. Megalichthys, genus of fossil fishes, XII. 385; XVII. 125.

## MEG-MEL

Megalodontes, genus of insects, IX. 182. Megalonyx, fossil mammals, XVII. 174,

MEGALOPOLIS, XIV 471.

Megalops, genus of fishes, XII. 251-fossil, 347

Megalopus, genus of insects, XI 147. Megalosaurus, fossil reptiles, XVII. 151naw and teeth of, XVI 433.

Megalotis, genus of mammalia, XIV 165 Megalurus, genus of fossil fishes, XII 336 Megapodius, genus of biids, XVI 807 Megaprotodon, genus of fishes, XII 302 Megara, XIV 472—war with Athens, IV.

194-philosophic school of, XVII. 786. MEGARIS, in Greece, XIV. 472. Megascelis, genus of insects, IX. 147. Megaspira, fossil mollusks, XVII. 111. Megasthenes, III 752.

Megatherium, XVII 174, 638-jaws, teeth, and dental tissues of, XVI. 441, 442 Megilloth, Targum on the XXI 24 Megrims, in hoises, XI 660.

MEHLMET ALI, OF MOHAMMED ALI, OF MO-HAMMAD ALEE, Pasha of Egypt, XIV. 472—history of, VIII 489 et seq—his massacre of the Mamelukes, 493—expeditions against the Wahabys, III. 365, 366, IV 493, VIII 493—his war with the Greeks, 494, with the Porte, ib his designs on Syria, V 66—his occu-pation of Jeiusalem, XII 735—his death and character, VIII 495-improvement of the manufactures and commerce of Egypt, 494—general policy, 496—his extension of cotton culture, VII 448, VIII. 516—his political and commercial improvements, 515, 516—conquest of Syria, XXI 374, XVII 198-his rule there, XX. 911.

MERITPOOR, fown in Hindustan XIV 472 MÉHUL (Etienne Henri), XIV. 472 Mehun, island, XVII. 413

MEHWAS, in Hindustan, XIV. 473 MEIBOM, or Meibomius (Marc), XIV 473. - (Henry), II 763

Meigen (J W), his works on insects, IX. 12. Meigle, vitrified fort at, IX. 792
Meikle (Andrew), XIX 10—his thrashing
machine, II 282, VI. 750.

——— (Mr), on evaporation, IX. 413 Memers (Christoph), XIV 473 MEININGEN, in Germany, XIV. 473. Meiocene, XVII 637.

Meionite, mineral, XV. 72. Meisenheim, XI 363. McIssen, town in Saxony, XIV 473-por-

celain factory at, XVIII 436 MEISSNER (A. Gottlieb), XIV 474. Mekka. See Mecca.

MERLONG, town of Siam, XIV 474. MEKONG, or Meikong river, XIV. 474; VI. 113; VII. 48; III 735; XX. 232. MEKRAN, or Mukran, in Beloochistan, XIV.

MELA (Pomponius), XIV. 474. Melado sugar, XX. 796. MELAMPUS, soothsayer, XIV. 475. Melancholia, XIV. 531

MELANCTHON (Philm), XIV 475, XVIII. 821, et seq., 826—his connection with Luther and the Reformation, XIII. 725, 726, et seg .- his approval of the Pennatetic doctrines, I 16, III. 537-quoted on moral distinctions, I 20—approved of the execution of Servetus, VII. 482 his philological learning, XVII. 523—his theological writings, XXI. 183—his followers, 1b -his definition of God, 184

—on theology, 199, et seq. Melandrya, genus of insects, IX. 132. Melania, fossil mollusks, XVII. 110. Melanism, in animals, XIV. 134. Melanite, XV. 85. Melanochroite, mineral, XV. 106

Melanoplectic membranes, III. 97 Melanopsis, fossil mollusks, XVII. 110.

Mclanterite, mineral, XV 97. Mclanthaceæ, nat. order of plants, V. 213. Melanthus, IV. 193

Melaphyre, rock, XV. 135. Melas (General), V. 574; X. 118. Melasis, genus of insects, IX. 105.

MEL-MEL Melasoma, family of insects, IX. 128. Melastomaceæ, nat order of plants, V 191 -region of, 228; XVII. 629 Melbourne (Lord), his administration, V 664, 665. See Lamb (William) in Australia, XIV. 477; IV. 286, 287, 290 MELCHISEDEC, XIV. 479. MELCHTHAL (Arnold of), XIV 481 MELDRUM (Old), in Aberdeenshire, XIV MELEAGER, Greek poet, XIV. 481 —— a Macedonian, XIII 773 Meleagrina, genus of mollusks, XV 348. Meleagris, genus of birds, XVI 786. Melecta, genus of insects, IX 200 MELEDA, Island, XIV 482. Melegnano, battle of, in 1859, XIX. 644 MELENDEZ VALDES (Juan), Spanish poet, XIV. 482. Meles, genus of mammalia, XIV. 155dentation of, XVL 462. MELETIUS, bishop of Antioch, XIV. 482. - founder of the sect of the Meletians, XIV. 483. anatomist, II. 754.

Meletta, genus of fishes, XII 237. Meletus, one of the accusers of Socrates, XX. 380, 388, 389 MELFI, town of Naples, XIV. 483.
MELI (Grovanni), XIV. 483.
Meliaceæ, nat. order of plants, V. 187. Melichthys, genus of fishes, XII 313 Melipona, genus of insects, IX. 203. Melissodes, genus of insects, IX. 200. MELISSUS, philosopher, XIV. 484. Mehta. See Malta. Melite, in Athens, IV. 169. Melithreptus, genus of birds, XVI 769 Melitophili, family of insects, IX 126. MELKSHAM, in Wilts, XIV. 484. Mellinus, genus of insects, IX 196. Mellita, fossil echinoidea, XVII. 100. Mellite, mineral, XV 125. Melliturga, genus of insects, IX. 200.
MELLONI (Macedonio), XIV. 484; I. 955—
the associate of Nobili, ib—the thermomultiplier improved by, ib .-- his discovery of the singular transparency of rock-salt for heat, ib.—on the specific action of different substances on the rays of heat, 956-on the coloration of heat, ib .- explanation of the point of maximum heat in the spectrum, ib on heat, XI. 265, 266, 276—his electroscope, VIII. 622—his thermo-electric pile, XXI. 652-his death, I 956. MELODICO, keyed instrument, XIV. 485.
MELODICO, XIV 485.
MELODY, XIV 485; XV 715.
Meloe, genus of insects, IX. 185. Melogramis' blowpipe, IV. 792 Melolontha, genus of insects, IX 124. Melolonthides, family of insects, IX. 124. Melon on political economy, XVIII. 220, - V. 198-culture of, XI. 733-structure of, V. 138, 126, 87, 80, 198—melon-cactus, 103—superiority of, in Hungary, XII. 10, 17—Persia, XVII. 421. Melonry, XI. 733. Melophagus, genus of insects, IX. 259. Melopsite, mineral, XV. 84. Melos, IV. 207. carved vegetables on, X. 668-fair at, TX. 468. Melsheimer (F. E.), his work on insects, IX. 24. MELSUNGEN, town in Hesse-Cassel, XIV. 486. Melted bodies, electricity of, VIII 565.
MELTON-MOWBRAY, XIV. 486; XIII. 321.
MELUN, town of France, XIV. 486. MELVILLE (Andrew), XIV. 486-M'Crie's Lafe of, XIII, 758. over the Alps, VI. 293, n.

INDEX. MEL-MEN Melville (James), XIV 489, n. (Sir James), XIV 489. (Lord). See Dundas (Henry). (Mr), on the colour of clouds, VII. 39 BAY, XIV. 490 Island, in North America, XVIII. 171, 178—flowering plants of, XVII. 626—coal in, XVIII 180—climate of, II. - ISLAND, on the coast of Australia XIV 490. Melyrides, family of insects, IX. 111. Melyris, genus of msects, IX, 111 Mem de Sa, V 281. Membracis, genus of insects, IX. 170. 20 Membranes of the human body, II 765 serous, 838-mucous, 1b.-synovial, 840 -cerebral, III. 56. 500 MEMEL, Prussian seaport, XIV 490 river, XVI 263 See Niemen.
MEMMI, or Di Martino (Simone), XIV 490. 2. 1. MEMMINGEN, town of Bavaria, XIV. 491. MEMNON, XIV 491; XI. 387 and n 11 a governor of Thrace, XIV 493.
Greek historian, XIV 493.
(Statue of), VIII 510.
the Rhodian, XIV 492.
Memnonium at Thebes, VIII. 509; XIV. Memorandum, in marine insurance, XII. Memory, XIV 576, 577—its improvement in the blind, IV. 777, 778—Condillac on, VII 284—artificial means of assisting, XV. 285-dependent on the state of the MEMPHIS, in Egypt, XIV. 493—architec-ture of, III 437—taken by Cambyses. VIII 465-necropolis of, 499-site of, 502-pyramids at, 437. - in Tennessee, XIV. 493; XXI. 156 ment. Memphitic versions of the Bible, IV. 700. Memphremagog, lake, XXI. 550. Memrulinaceæ, XXI. 1005. MENA (Juan de), Spanish poet, XIV. 493; XVIII 113 Menæchmus, geometer, VII 249; X 499 MENAGE (Gilles), XIV. 498—his Tabletalk, II. 738. MENAI STRAIT. XIV. 494- suspension bridge, I. 875; XXI. 146 — tubular bridge, XII 607. MENAM, or Meinam, river of Siam, XIV. 494, XX 232. 761 MENANDER, XIV. 494—his dramas, VIII. Menangcabau, in Sumatra, gold and iron ore of, XX 804—iron and steel manufactured at, 805 MENASSEH (Ben Israel), XIV. 495 Mencherês, Egyptian king, VIII. 455. Mendana (Alonzo de), his discovery of Solomon's islands, IV 264. - ıslands, XIV 313. MENDE, French town, XIV. 495 MENDELSSOIN (Bartholdy Felix), XIV. 495 - (Moses), XIV. 496. Menderé, river in the plain of Troy, XXI Mendez (Alphonzo), II. 56. —— Pinyo (Ferdinand), XIV 497.

Mendicancy, XVIII. 295—compared with
pauperism, 298—extent of, in England, MENDICANTS, or Begging Friars, XIV. 497 -at Benares, IV. 644. - their proportion to the population, in France, X. 268—formerly in Ireland, XVIII. 298. MENDIP HILLS, XIV 497; XX. 410-silver from, ib.

Mendipite, mineral, XV. 105.

Mendosoma, genus of fishes, XII. 288.

MENDOZA (Diego Hurtado de), XIV. 497

(Don Pedro de), XVII. 780.

(INIGO LOPEZ DE), XIV. 498.

-poetry of, XVIII. 113-his romances,

(Francis), on aeronautics, II 167.

- (Jorge de), V. 727. - in La Plata, XIV. 499; XVII. 779.

Mendizabel, XX. 479.

Mendoza river, XIV 499. XIV 500, VIII 454 by, IV 262 Menestheus, IV. 193 500; XVII 69 samty, Brain Memory, &c. Menura, genus of binds, XVI. 754 MENZELEH, lake, XIV. 540, VIII. 429; XX. 789 Menzies (Michael), his invention of the thrashing-machine, II. 262. Meonite, mineral, XV 72 Mephitis, genus of mammalia, XIV. 157 Mephitism, death from, XIV. 430 MEPPEL, town in Holland, XIV 540. MEQUINEZ, town in Morocco, XIV. 540. Mercantile axioms, VII. 192. - system of political economy, VII. 192, 194; IX. 436; XVIII 214. navy, XX. 28, 29—state of, at dif-ferent periods, 119, 124, 127, 130, 134, 137, 138-of Tuscany, XXI. 394 MERCARA, town in India, XIV. 540. MERCATOR (Gerard), geographer, XIV 540; X 495; XVL 4. (NICOLAS), XIV. 540
Mercator's chart, X. 495, 488; XVI. 4; VI. 426; X. Plate. - sailing, XVI. 16.

Mercenaries, Carthagmian war with the, VL 290—in the continental armies in

service, table of steamers in XX.

the eleventh century, VIII 667, n.

Mercer's Hall, London, XIII. 677. Merchant Company, Edmburgh, VIII. 403.

Maiden Hospital in Edmburgh,

seamen, XX. 28.

VIII. 402.

MERCIER (Louis Sebastien), XIV. 541. de la Riviere, VIII, 376. MERCURIUS, Roman divinity, XIV. 541caduceus of, VI 51. See Hermes.

- a metal, VI. 497, XV 65, 114--discovery of the congelation of, I. 759-sometimes rendered solid in northern countries by the natural cold of the atmosphere, VII. 100; XIII. 236employed in the barometer, IV. 450 et seq, and thermometer, 457—coefficient of expansion of, I. 957—method of computing its depression in barometers, VI 216—Hutchin's experiments on the degree of cold at which it freezes, 352—its cohesion, VII. 57—table of its depression in glass tubes, VI. 219; VII -congelation of, 107—specific gravity of, XIL 88—its phenomena in capillary tubes, 94—poisoning with, XIV. 433; antidotes and means of detection, ib.mode of combining it with other metals, II 647—imports of, XV 288—in Cali-fornia, VI. 98—mines of, XV 287, in Bavaria, IV. 517—Europe, IX 387—Idria, XII. 357—Peru, XVII. 471— Spain, XX. 489-its action as a poison, XVII. 702-solution of, called quicksilver

Méré (Chevalier de), on probability, XVIII.

Mereweather (Mr), his history of boroughs, XV. 683 n, 684. Mergansers, birds, XVI. 819.

work on the insects of Surmam, IX, 3

- town in Venezuela, XIV. 542.

town in Mexico, XIV. 542

Meridian, IV. 1; X 480, 465—first meridian, XIII. 685—of globes, X. 485—circles, IV. 153—to trace a meridian hne on any plane, VII. 787.
Meridional mounting of telescopes, XXI.

Merino sheep, introduced into England,

II. 263; VIII. 724—in France, X 248
—wool of, XXI 905; efforts to produce it in England, 910.

—— (Martin), his attempt to assassinate the Queen of Spain, XX. 483. Meriones, genus of mammalia, XIV 182.

MERIONETHSHIRE, XIV. 543 — population and value of property, VIII. 754—auriferous rocks in, XV 233 Merit, popish doctrine of, XVIII. 386.

Merlangus, genus of fishes, XII 270. MERLIN (Ambrose), wizard, XIV. 544. bird, XVL 745.

- in fortification, IX. 807. (THE WILD), wizard, XIV. 544. Merluccus, genus of fishes, XIL 270. Mermaid, XIV 217—in heraldry, XL 334. Merman, XIV. 217. Merodon, genus of insects, IX. 241. MEROE, island, XIV. 545. Merom, lake, XVII. 185.

Meromyza, genus of insects, IX. 257 Merops, genus of birds, XVI. 772. Merou, genus of fishes, XII. 276. Merovæus, X. 2.

MEN-MER MER-MER Merchant Tailors' Hall, London, XIII 678 MENDRISO, Swiss town, XIV 499. -school, 667 Merchants, their character, VII 197-un-Mene, genus of fishes, XII. 299. accustomed to general views, 198—open to erroneous impressions, ib — their MENEDEMUS, Greek philosopher, XIV 499 MENEHOULD (Sainte), French town, XIV. opinion of the usury-laws, 199-health of, XIV, 442 MENELAUS, king of Lacedæmon, XIV 500 —— astronomer, X. 501.
Menenius Agrippa, XIX. 299
Menes, founder of the Egyptian empire, Merchants' House, Glasgow, X. 653. MERCIA, XIV 540, VIII. 658. Meneses (Don Torge de), Papua discovered Mercury, planet, IV 65, 89—phenomena of, 51—disturbances of its orbit, 106— Menetries (E), his work on insects, IX. theory of its motion, 89-transits of, 62, - (J F), his work on insects, IX. 21 MENG-TSEU, Chinese philosopher, XIV Mengin (Felix), on the Wahabys, III. 364, Mengite, mineral, XV. 101, 111. MENGS (Antony Raphael), painter, XIV Menilite, mineral, XV. 69. MENIN, town of Belgium, XIV 501. MENIPPUS, Cynic philosopher, XIV. 501 Menispermaceæ, nat order of plants, V. 181 MENNO (Simonis), XIV. 501. Mennonites, sect, XIV. 501, II. 743—in Prussia, XVIII 664 Menobranchus, genus of reptiles, XIX. 84 Menopoma, repule, XIX. 84—cranium, upper jaw, and teeth of, XVI. 430.

Menotti (Ciro), XII 655 Menou (Abdallah), V. 583.
——— (General), VIII. 489, X. 96.
Menptah, Egyptian king, VIII 462 Menschikoff (Prince), XIX 500 Menstruation, XVII. 682. MENSURATION, XIV. 502. water, X. 626-fulminating, XVIII. 707 MENTAL DISEASES, XIV. 526 — mental alienation, 426. See Dæmoniac, In-- advantages of, for thermometers, XXI. 221 - Trismegistus. See Hermes. philosophy, Bacon's reflections on, I. 32—its advancement promoted by Meredith (Sir William), V 474 the improvement of language, 39 Aristotle's, III 548—applications of phrenology to, XVII 565 See Ethical Philosophy, Metaphysics, Moral Phi-losophy, Phrenology, Biain, Ideas, MERGUI, town in Hindustan, XIV 541. Mergus, genus of birds, XVI. 819. Mentel, the thoracic duct observed by. II Meia, genus of insects, IX. 195. MERIAN (Jean Bernard), XIV. 541. Mentelm, early printer, XVIII 532
MENTSCHIKOFF (Alexander), XIV. 540;
VI 333; XIX. 478, 480.
MENTZ See Mayence - (Maria Sibylla), XIV. 542-her (MATTHEW), painter, XIV. 542. MERIDA, town in Spain, XIV. 542. Menu on Hindu penance, XI. 469.

#### MER-MET

Merovingian dynasty, X. 2, 239. MERRICK (James), poet, XIV. 545—on the Greek poet Tryphiodorus, XXI. 362 Merrimac, river, XIV. 340 MERRY (Robert), XIV 545 Merrythought, bone of birds, III 86. Merse, IV. 679 See Berwickshire MERSEBURG, town of Prussia, XIV. 545 MERSENNE (Marin), XIV. 545; XVI 533 -his opposition to Pascal IV 451. MERSEY, river, XIV. 546; VI. 529, VIIL 716, XIII 177-quantity of suspended in the water of, XVI 86—physical characteristics of, 84.

- screw steam-frigate, XX. 665. Mertæ, Caledonian tribe, VI 74. Merthyr Tydvil, XIV. 546—iron-works near, X. 642.

Merton College, Oxford, XVIL 35; XXI

MERV, or Meru, town in Turkestan, XIV. 546.

Meryx, genus of insects, IX 142 Merz and Mahler (Messrs), their telescopes, XXI 121, 122

Mesembrina, genus of insects, IX 249. Mesembryanthemaceæ, nat. order of plants, V. 194-region of, 228; XVII. 629.

Mesh of nets, IX. 638; XIX. 89, 91, 92 MESHED, or Mushed, Persian town, XIV. 546-valley of, XIII. 78. Mesitine-spar, XV 92.

MESJID, or Musjeed, Alı, Turkish town, XIV. 546.

- Hossein, XIV. 546; XIII. 71. MESMER (Friedrich Anton), XIV. 547; XX 416.

Mesmerism. IV. 374: XIV. 465: XX. 413, 416-mesmeric mania in Britain 441.

Mesocarp, in botany, V 135. Mesoderma, genus of mollusks, XV 350-fossil, XVII 108.

Mesogaster, genus of fossil fishes, XIL 346.

Meso-Gothie language, XIII. 210, 211.

Mesole, mineral, XV. 75

Mesolite, XV. 75 — pyro-electricity of,
VIII. 560 — its use in micrometers, XIV. 744.

MESOLONGHI, XIV. 547-stege of, in 1826. XI. 29-death of Lord Byron at, 28; VI.

Mesophlœum, in plants, V 82 Mesopithecus, fossil mammal, XVII. 167. MESOPOTAMIA, XIV 548; IV 364 Mesoprion, genus of fishes, XII 276. Mesotype, XV. 75 — pyro-electricity of, VIII. 560.

Mesozoic epoch, in geology, XV. 195, 205;

XVIL 587 Mesphres, XI. 386

Mespilus, genus of plants, XVII. 763. Messalina, XIX. 336; XX. 45 MESSALLA (C. Marcus Valerius), XIV 548 MESSANA, or Messene, town in Sicily, XIV 548—coins of, XVI. 366

Messance (M.), on the population of France, XV. 602

MESSENE, town in Greece, XIV 549. Messengers-at-Arms, XI 321 Messenia, in Greece, XIV. 549; XI 13-

coins of, XVI. 372—subdued by the Spartans, XX. 499.

Messeman wars, XX. 499, 501.

Messiah, XIV. 549; XXL 207; VI 634—
meaning of the word, I 480, n 1— Jews' expectation of a millenium under the reign of, XV. 13

MESSIER (Charles), XIV. 549-on the solar spots, IV. 28, 29.

MESSINA, in Sicily, XIV. 550; XX. 255— straits of, 241—Fata Morgana, in the straits of, IV. 490; XX. 41—university of, XXI. 492.

Mestizos of Mexico, XIV. 719-of Peru, XVII. 474.

MESTRINO (Nicolo), violinist, XIV. 550. Mesue, ancient physician, XX. 815. Meta, South American river, VII. 133;

Metacarpal bones, in man, III. 33-in the mammalia, 81-in buds, 86.

# MET-MET

Metacentre, XII. 83; XX. 154 Metachlorite, mineral, XV 78 Metagelatine process, in photography, XVII. 549.

Metallic couples, thermo-electric power of, XXI, 650

colours, XV. 59-stones, 90. produce of the world for 1854, XV. 248; and its value, 249-poisons, XIV. 432-parometer, IV. 460-money, XV

- polarisation, I 914, XVI 541, 683 \_\_\_\_ salts, in sea-water, XVII. 572. Metalloids, VI. 438, 455, 471.

Metallurgy, knowledge of, in northern Europe, derived from foreign sources, III. 431-of lead, XIII 398.

Metals, in chemistry, VI 482 et seq—in mineralogy, XV 60, 65, 113—alloy of, II. 595-annealing of, III. 218, XX 756 - distinction between cast and malleable, III. 219-influence of heat on the electric fluid in, VIII. 561—their diffusion into vapour by electricity, 589 -fusion and oxidation of, by electricity, 592, 593-revival of oxides of, 593magnetism of, XIV. 26—gilding of, X their power of conducting heat, XI. 261-expansion of, by heat, 268operations depending on their contraction by cooling, 269—their poisonous qualities, XIV. 432 et seq—films on, quantities, AIV. 552 et seq—mins on, XVI. 603—colours of, 666, VI 482— polarisation in, XVI 542—distribution of, XVII. 620 et seq—cohesion and strength of, XX. 756—their tenacity increased by mixtures, 757-different conducting power of metals for dif-ferent electricities, XXI. 621-coloured rings formed on, by voltaic currents, -multiplication of works of art in metal by voltac electricity, 635— thermo-electricity developed in, 649, 650 — conductibility of, for thermo-electricity, 651, 652 See Precious electricity, 651, 652 Metals, Gold, Silver, Iron, &c. Metameric bodies, XII 630

Metamorphic rocks, XV 130, 150, 153; XVII. 587-schistose, XV. 154-classification of, 155-in Scotland, XIX. 792-

as building-stones, XX, 712 Metamorphoses of insects, IX. 52.

METAPHOR, XIV. 550; IV. 547, 548; XIX. 132 et seq.
Metaphysical, misapplication of the term.

I 228—influence of metaphysical studies,

Metaphysicians on the nature and essence of the soul, L 57 - of the eighteenth century, 114-their enumeration of the mental faculties, XVII. 673.

METAPHYSICS, XIV. 551—little advance made in, before the seventeenth cen-tury, I 20—progressof, in the eighteenth century, 227-change in the meaning of the word since the publication of Locke's Essay, 1b -benefits arising from the study of, 228—the term affords a specimen of all the faults which the name of a science can combine, 310-abstraction in, II. 52-Aristotle on, III. 541-speculative inquiries of the Athenians, IV. 211much cultivated in India, V 271-Kant

on, XIII. 46. See Mental Philosophy. METAPONTUM, in Magna Græcia, XIV. 625—coins of, XVI 363.

Metarsus in birds, III. 86. METASTASIO (Pietro), XIV 625-his tragic

operas, VIII. 147. Metatarsal bones, III. 36. Metaurus, battle of, XIX. 311.

Metâwileh, followers of Aly, XX 908 Metaxas (M), on the debt of Greece, XI.

Metaxite, mineral, XV. 79, 80 Metayer system of farming, in France, X. 245, 249; Greece, XI. 15; Lombardy,

XIII 650; Tuscany, XXL 394. Metcalfe (Rev. F), on the Lofoden fishery, XVI. 327.

(Lord), governor of Jamaica, XII. 674-his law of 1835 relating to the newspaper press in India, XVL 204.

## MET-MEX

METELLUS, Roman family, XIV 627 Quintus Cæcilius Macedonicus,

XIV 627 - Celer, ib

Numidicus, ib. Pius, ib

· Pius Scipio, ib.

METEMPSYCHOSIS, XIV 628; XVIII 711a favourite tenet of the Hindus, XI. 470-taught by the Druds, VIII 184

Meteora, rocks of, XI 12 Meteoric iron, VI 488; XV 114—fragments of, in the British Museum, XIV. 635 See Meteorolite

METEOROLITE, XIV. 629--cause of them hitherto inexplicable, I 580—Fusinieri on the origin of, VIII. 584.

METEOROLOGY, XIV 636, XVII. 571 proposed use of balloons m, II 184influence of forests and mountains on climate, 671, 672-rain most abundant in elevated land, 671-Leshe's atmometer, IV. 177-electricity of the atmosphere, VIII 577 - fire-balls and falling stars, IX. 586—great hail storm in France, X. 48-Harmattan wind, XI 229-optical, XVI 688-sea and land breezes in Sumatra, XX. 803-list of breezes in Sumarra, AA. 803—11st of works on, XIV. 689. See Atmosphere, Barometer, Climate, Cold, Cloud, Dew, Evaporation, Fog, Hail, Hygrometry, Monsoon, Rain, Rainbow, Snow, Wind,

Meteors, XIV. 684-Chaldm on, I 892-Descartes' Treatise on, VI. 279-description of one seen at Windsor, 345. See Meteorolite

Meter (gas), X 422

METHODISTS, XIV 691; IX. 395-origin of the name, XIV 454-their places of worship in England and Wales, VIII. 745-in Ireland, XII 532. See Wesley. Whitefield

METHODIUS, XIV. 694.

- THE CONFESSOR, XIV 694 METHONE, city of Messenia, XIV. 695 Methvin treaty of Great Britain with Portugal, VII 193.

Metis, planet, IV 91

METTUS (Adman), XIV 695; X. 504-on the quadrature of the circle, XX. 521. — (James), alleged inventor of the telescope, XVI 527
Métivier (Comte de), his work on insects,

IX. 24.

METON, astronomer, XIV. 695; III 788; VI 665.

Metonic cycle, in chronology, III 788, VI. 79, 665; VIL 607.

METONYMY, in rhetoric, XIV. 695. Metope, III. 510.

Metopus, genus of insects, IX 190.
Metre, French measure, X. 284; XXI.
805.

Metrodorus, Greek painter, XVII 57. METRONOME, XIV. 695, VI. 710, XIX. 150—pendulums, XVII 386.

Metternich (Prince), his policy, IV 305. 806, 307 ; X. 162 METTRIE (Juhen Offray de la), XIV. 695.

Merz, town of France, XIV. 696-aqueduct of, III. 335-population, X 277 METZENSEIFEN (OBER and UNTER), vil-

lages in Hungary, XIV. 696. METZINGEN, in Wurtemburg, XIV. 696. METZU (Gabriel), painter, XIV 696. Meunier, his attempt to assassinate Louis

Philippe, X. 213. MEURSIUS, or De Meurs (John), XIV. 696 MEURTHE, in France, XIV. 697.

- river, XIV. 697.

MEUSE, in France, XIV. 697.

— river, XIV. 698; IV. 611; XI. 581

MEUSEL (Johann Georg), XIV. 698—notice of his Bibliotheca Historica, IV

Mensmer (M.), his method of adjusting balloons, IL 173.

Mevelavites, dervises, VII. 757. Mewar, in India, XVL 515.

714

Mexicans, their character and appearance, II. 684—affinity with Asiatics, 695—tradition of the Deluge, VII. 719

#### MEX-MIC

anthropophagy among the ancient,

III 270—picture-writing, IL 684. MEXICO, XIV 698, II 633, 705—climate of, 673—mountains of, 674—civilisation of, 685—revolution in, 702—ancient architecture of, III. 438—castes in, VI 316 - government of, under the Spaniards, XIV. 707—conquest of, by Cortes, VII 418—dancing in, 644— French trade with, X 260-volcanoes, XVII. 593-height of mountains in, 645 -jalap plant, XIL 671—hbranes, XIII. 430—silver mines of, XV 235; XVII. 622—monarchy, XV. 413—mythology, 767-produce of precious metals, XVIII. 461; XV. 248-Piescott's History of the Conquest of, 504, 506 -war with the United States, XXI 442—weights and measures, 812—map of, XIV. Plate. city of, XIV 722.

- Gulf of, XVII 577.
- New, XIV 729 — ceded to the United States, 714-language of, XIII.

Meydoom, pyramid of, VIII, 503. Meyen, on zones of vegetation, V. 225,

(Dr), on the pilot fish, XII. 294. (Prof F. T), on the structure of animalcules, III. 208

Meyer (Dr Charles), on Celtic philology, XVII 530

(FELIX), painter, XIV 730. (Jacques), XIV. 730

(JOHANN HEINRICH), XIV 730. (Moritz), on metal for cannon, VI 178

(M. Von), on fossil animals, XVII. 133 et seq

(Prof.), his theory of apparations, III. 315-his opposition to Dr Joseph Black's view of the nature of quicklime, IV. 738

Meyer's elliptic lamp, XIII 172 Meyena, fossil lobsters, XVII. 102. Meynell's system of hunting, XII. 35 MEYRICK (Sir Samuel Rush), XIV 730. MEYWAR, XIV. 781; XVI. 515

Mèze, Fiench seaport, XIV. 731. Mezen, river, XIX. 516 MEZERAI (F. Eudes de), XIV 731 Mezereon, order of plants, V 205

MEZIÈRES, town in France, XIV. 731— engineering school of, IX 821 MEZO BERENY, town in Hungary, XIV.

- Hegyes, Hungarian village, XIV. 731.

Koveso, Hungarian town, XIV. 731. - Tur, Hungarian town, XIV. 731.

Mezomorto, dey of Algrers, II. 571. Mezzanine, in architecture, III. 510 MEZZOFANTI (Joseph Caspar), cardinal, XIV. 731.

MEZZOTINTO engraving, XIV. 783, VIII. 799, 800, XIX. 465-on steel, VIII. 810 -invention of, XX. 270.

M'Glashen's tree-lifter, XI 696. Mglin, town in Russia, XIV. 734. MIARO, or Miaco, city in Japan, XIV. 734.

Miami, river, XVI. 489. Miargyrite, mineral, XV. 122 Miava, Hungarian town, XIV. 734.

Mica, XV 77-in granite, 136-decomposition of, II. 390—analysis of, 1b.—soils from, ib.—used for window glass, X. 658—magnetism of, XIV. 27—its use in the polarisation of heat, XI. 267; I.

957 and n. 2
— schist, XV. 154—its distribution in Scotland, XIX. 792—in Sutherland, XX.

MICAH, prophet, XIV. 734.
MICHAEL I. (Rhangabe), emperor, XIV. 784: VII. 313.

- II., BABBUS, XIV. 735.

- III., XIV. 735.

- IV., the Paphlagonian, XIV. 735.

- V, CALAPHATES, XIV. 735. - VL, STRATIOTICUS, XIV. 735.

- VII., PARAPINACES, XIV. 735.

#### MTC-MID

MICHAEL VIII., Palæologus, XIV. 735, VII. 318.

(St), island, IV. 335.

(Sr), one of the Azores, XIV 735, IV. 335.

- (St), order of, XL 340; XIII 120, 111: XII. 448

MICHAEL'S MOUNT (St), XIV 735. MICHAELIS (Johann David), XIV. 735; XVII. 533-his works on biblical criticism, XIX. 828

MICHAELMAS, XIV. 736-Oxford and Cambridge term, XXI. 458, 463 Michaud on the Crusades, VII. 536

MICHAUX (André), botanist, XIV. 736 MICHEL ANGELO BUONARDOTI, XIV 736 XIX. 862-his architectural works, III 452-his style of painting, 708, 709; XVII 64-his genius, VIII. 171-compared with Raffaelle, XVII 67.

Michelet on Aristotle's metaphysics, XIV 553, n. 3—on Richelieu, XIX. 164—his translation of Vico's Scienza Nuova, XXL 582.

Michelinia, fossil corals, XVII. 97. Michell (Rev John), his apparatus for experimenting on the density of the earth, VI. 353, 354-on magnetism, XIV. 4-his artificial magnets, 690.

Michelotti (Ignazio), on hydraulics, XII.

· (Prof.), on hydrodynamics, XII. 72, 112, 113, 115; XIX. 187, 189 MICHELOZZI (Michelozzo), XIV 788
Michie (M1), of Nine Elms, his vertical steam-engines, XX. 611.

MICHIGAN, North American state, XIV. 739; XXI. 419-debt of, 428-wine.

- LAKE, XIV. 740; XVII. 605. MICIPSA, king of Numidia, XIV. 741; XIII. 15.

MICKIEWICZ (Adam), Polish poet, XIV.

MICKLE (William Julius), XIV 742. MICON, Athenian artist, XIV. 742. Micon, Island. See Mycone. Micraster, fossil echinoidea, XVII. 100 Microcephala, family of insects, IX. 104. Microconchus, fossils, XVII 101. Microdactylus, genus of birds, XVI 797 Microdon, genus of insects, IX. 238-of

fossil fishes, XII 337. Microdonophis, genus of fishes, XII. 232. Microgaster, genus of insects, IX. 188. Microglossus, genus of birds, XVI. 783. Microichtys, genus of fishes, XIL 275 Microlestes, fossil mammal, XVII 157

MICROMETER, XIV. 742; XXI. 119—discovery of, by Huygens, I. 612—Cavallos', VI. 346—Maskelynes', XIV. 336 Micrommata, genus of arachnides, III. 381.

Micronesians, in ethnology, IX. 347. Micropeplus, genus of insects, IX. 104. Micropeza, genus of insects, IX. 253. Microphis, genus of fishes, XII 316. Micropyle, in botany, V. 133, 139

MICROSCOPE, XIV 763—wonders disclosed by, III. 197—its utility in science, 198; in medicine, XIV. 464; in anatomy, II 768-gardeners' portable, V. 66-invention of, XVI. 524, 529; I. 627; X. 376—mirrors for, XVI. 576—micrometers for, XVV. 760—magnifying power of, XVI. 598.

Microscopic animals, III. 193-microscopic photographs, XVII. 552. finder, XIV. 783

Microstoma, genus of fishes, XII. 250. Microtherium, genus of fossil mammals, XVII. 165.

MIDAS, XIV. 807.

Middle Ages, intellectual darkness of, I 14—armies of, III. 685—drama of, VIII. 143—education in, XV. 808—fables of, IX. 462—historians of, XI. 548—agri-culture during, II. 251—progress of geography during, X. 468—libraries of, XIII. 386—funerals of the nobility and gentry during, XI 341—coins of, XVI 385—chronicles of, VIL 585—rate of interest during, XII 428—painting

# MID-MIL

XVII 60-pantheism, 233-philology, 520-poetry, XVIII 108-presbyterian-1sm, 485-history of the city of Rome in, XIX. 365—masonry, XX 710, 733—window tracery, 734—vaulting, ib spires, 735

Middle Temple, XIL 384. MIDDLEBURG, in Holland, XIV 807—set-tlement of the Biownists at. V. 688—

captured by the Prince of Orange, XI.

island, IX. 266.

MIDDLESBOROUGH, in Yorkshire, XIV 807 MIDDLESEX, XIV 807—population and value of property, VIII 754

- Hospital, London, XIII 673 MIDDLETON (Conyers), D.D., XIV 809accused of plagrarism towards Bellenden, IV 637—his quarrel with Bentley, -on the classification of books, 715, 716-controversy excited by his Inquiry into the Miraculous Powers of the Christian Church, XXI 729.

(Captain), voyage of, XVIII 169 (Sir Hugh), XIV 810, 808; VIII.

647; XIII 664

(THOMAS), XIV 810. (THOMAS FANSHAW), DD, XIV.

ın Lancaster, XIV. 811. in Ireland, XIV. 811

Moor, limestone with chert nodules at, XV 147

Middleton's perfecting machine, XVIII.

Middletonite, mineral, XV 124 MIDDLETOWN, in Connecticut, XIV 811.
MIDDLEWICH, in Chester, XIV 811. MIDHURST, in Sussex, XIV 811. Mid-Lothian See Edinburghshire. Midnapoor, in Bengal, XIV. 811. Midshipman, XVI 102, 105. Midwifery, XIV. 461—use of chloroform

in, VI. 629, 630. Miecislas, Polish kings, XVIII 137, 138,

140.

MIEL (Jan), XIV. 811 MIERIS (Francis), XIV. 812.

- (FRANCIS), junior, XIV. 812. (WILLIAM), XIV 812 Miers (Mr), on the Andes, II. 669 Miesite, mineral, XV. 106

Mignan (Capt), on the ruins of Babylon, IV 345.

MIGNARD (Nicolas), XIV 812.
——— (PIERRE), XIV. 812 Mignon, or Minion (Abraham), XIV 812. Mignonette order of plants, V 182 Migration of animals, XII 329—of birds, XVII. 633 - fishes, 635 - of herring,

XII. 235, 329 Miguel (Don), V. 289; XVIII 389, 390. Minist (St), French town, XIV. 812 Mikalitza, town in Turkey, XV. 674. Mikhail, king of Russia, XIX. 475

MILAN, XV. 1; XII. 645—academy of sciences at, II. 63—academics of aichitecture and the arts, 68-government of, XIII. 644 - cathedral, III. 448-Ephemeris, 815 - Ambrosian library at, XIII. 413—Napoleon's decree at, X. 149—ancient writings discovered at, VI 744, 745-irrigation near, XIII. 648 -insurrection at, in 1848, XII. 657-pavement of the streets, XIX. 224live-stock in the territory of, XIII 649, 650-imperial institution of, XII 661early printing at, XVIII. 533—school of painting, XVII. 72, 73—production of silk in the province of, XX. 278 See Mediolanum

Milano (Joannes de), a poem, Regimen Sanitatis Salernitanum, ascribed to, XX. 816.

MILAZZO, or Melazzo, town in Sicily, XV. 4, 746.

MILBORNE PORT, in Somerset, XV. 4. MILDENHALL, in Suffolk, XV. 4.
Mildew, V. 172—method of protecting garden peas from, XI. 738

Mileage of railway stock, XVIII. 784mileage run by engines, ib. Miles, XIII. 112.

## MIL-MIL

Milesia, genus of insects, IX. 239 MILETUS, XV. 4-architectural remains at, III 442

Milfoil, plant, V 197 Milford, in Wales, XV 5

-HAVEN, XV. 5; VIII. 721; XVII.

MILHAU, town in France, XV 5. Milichia, genus of insects, IX, 257 Miliolite limestone, XXI 1007 MILITARY FRONTIER, XV 5

– Academy at Woolwich, II 71. College (Royal), IL 71

forces of the European States, IX. 398.

- or martial law, XV. 5 - science, XXI 698—terms used in, 702-military training of the people,

-tenures See Feudal System, Chivalry, Knights and Knighthood

MILITIA, XV. 6-British, III 666, V. 517, 518-Irish, XIL 524-of United States, XXT. 430

- Act, V 605.

MILIZIA (Francesco), architect, XV 10. MILE, XV. 10-cow's, VII 624-horse's XI. 639-rein-deer's, XIII 239-che mical composition and properties of, VI. 523-animalcules found in, III 210 influence of food on the qualities of, VII 621—average annual yield per cow, 622-adulteration of, IX. 769unknown to the Chinese, VI 589 --sugar of, VIII 47 See Dairy Milk-quartz, XV 69.

Milk-teeth, III 26. Milk-tree, X 367 See Cow-Tree. Milkweed order of plants, V 199. Milkwort order of plants, V. 183

Milky Way, I. 842, 843, 844, IV 86, X 369-all visible stars belong to that

system, I 845

Mill (James), XV. 11—in treating of benevolence, has overlooked the delight from virtuous conduct, I. 396—his theory of government, 401—on education, 1b—on custom as a form of law, XIII. 258-on the civilisation of the Hindus, XI 547-on British India, 488-on the character of Warren Hastings, 496-his statement of W. Hasting s case, 240-on Sanscrit poetry, V 270—his article Colony in this work, VII 134—his defence of commerce, XVIII 231—on prisons, 564—on the character of Ricardo,

— (John Stuart), XV 13—his work on logic, I 803—on logic, XIII 583—on social laws, 263, 264-on the sale of poisons, XX. 800-on the science of human nature, XIII. 263-on propositions in logic, 573, n 1—on syllogisms, 624, n 1, 625 n, 627—on Hume's argument on miracles, IX. 417—on fallacies, 476, 478-on statistics, XX. 549, 551,

- (John), XV. 13-his New Testament, IV 698; XIX. 837

Millar (Prof.), on castes, VI 315—his account of Adam Smith's lectures, XX

- (Walter), XIX 779 Millbank Penitentiary, XVIII 570 MILLEDGEVILLE, in United States, XV. 13: X. 565.

MILLENNIUM, XV. 13; I. 510-a doctrine of the Koran, 303

Milleporidæ, XXI. 1005-fossil, XVII. 96.

MILLER (Hugh), XV. 15-on fossil ferns, V. 235-his classification of Old Red Sandstone rocks, XV. 200-on the Pterichthys, XVII 120-on the Coccosteus. 122—on Holoptychius, 124—on the geology of Staffordshire, XX. 529. - (General), IV. 828.

(JOHANN MARTIN), XV. 16.

— (John), railway bridge at Linton constructed by, XVIII 762—his viaduct across the Union Canal, 762, 763.

- (Mr), on the fall of rain at Seathwaite, XIV. 657.

# MIL-MIN

Miller (Patrick), of Dalswinton, his steam-

boat, I 869, XX 134, 637

— (Prof), his analysis of coal-gas, X 430—on the fermentation of snuff, XXI 296

Millericrinus, fossil echinoderms, XVII.

Millerite, mineral, XV 16. Miller's safety-poles, XIII 448. Miller's thumb, fish, XII. 280. Millers, diseases of, XIV 443. Millesimo, defiles of, X 100

MILLET, XV 16, XVII 630—its culture ın Indıa, XI 458—ın Bengal, IV. 649.

Milliary column, VII 159 MILLIN DE GRAND-MAISON (Aubin-Louis), XV. 17.

Milliners, diseases of, XIV. 442 Milling, in woollen manufacture, XXI.

922 MILLINGEN (James), antiquary, XV 17

Millington (J), notice from, legalding Sil Isaac Newton, XVI 207

MILLOT (C .- Francois - Xavier), historian, XV. 17

Mills, slow improvement of, III, 706commonly situated in towns, XIV 284 -fulling or scouring mill, X. 327-of Woltmann, XII 143, Barker's, 172—lead mill, X. 670—glass-cutter's, 674 rolling mills in iron manufacture, XII 561—lapidary's, XIII 231, 232. Millstone grit, XV. 203.

Millstones, rock of the Abbey Craig, near Starling, well fitted for, VI. 750—of Cairnmore, in Monaghan, XV 410—of Kirkcudbrightshire, XIII. 99.

Milman (Dean), his account of Manicheism. 264.

MILNE (Joshua), XV 18—on annuates and assurances, III. 222, XII. 400; XV. 611, 625, 634—his article in this work on human mortality, 600, n-on the mortality and population of the United States, XVIII. 340, 341.

(David), his Essay on Comets, I.

784, n. 1

Milne-Edwards (H), his work on insects, IX 16-on the blood of the annelides, XI 292—on the young of terebella, 295—on the mollusca, XV 319—on the circulating system of the lobster, 357on the compound ascidians, 331 - on polypcs, XXI 1001 - his airangement of the Helianthoida, 1004.

MILNER (Isaac), XV. 18. - (Jonn), XV. 18

—— (Joseph), XV 18 Milnthorpe, in Westmoreland, XV. 18. MILO (T A Papianus), XV. 18.

- island, XV. 19. MILON, ancient wrestler, XV. 19. Miloschin, mineral, XV. 84. MILTIADES, XV. 19; IV 199.

Multogramma, genus of insects, IX 248. MILTON, town in Kent, XV. 19.

(John), XV 20—Bentley's edition

of Paradise Lost, IV. 659-on the censorship of the press, 712-examples of comparisons from his poems, VII. 219, 220—anecdote of, VIII. 41—his intimacy with Andrew Marvell, XIV 324-MSS. of, at Cambridge, XIII. 397—poetry of, XVIII. 92, 95, 122-his definition of the qualities of poetry, 95-first edition of his works, 538—his opinion of Shak-speare, XX. 73—Warton's edition of his minor poems, XXI. 736.

Milvian bridge, battle of, XIX. 352. Milvus, genus of birds, XVI. 743 MILWAUKEE, town in Wisconsin, XV 35.

Mimetesite, mineral, XV. 106 Mimosa bark, imports of, IV. 445-its use

ın tanning, XIII 306. Mina (Don F Espoz y), Spanish general, XV. 35; X. 186; XX 475, 476, 479.

- (Don Xavier), XIV. 710. Mina-bud, XVI. 753. MINAS GERAES, in Brazil, XV. 35-popula-

tion of, V. 295. Minasi on Fata Morgana, IX. 490; XX. 241

MINCHINHAMPTON, in Gloucester. XV. 36.

## MIN-MIN

MINCIO, river, XV. 36.

Mind, XV. 537 et seq -phenomena of, enturely different from those of matter, L. 10; relation between them, 124, 125misapplication of the word substance to, 242, 243-Aristotle on, III. 548-im-242, 243—Anstone oft, III. 548—fin-proved by bodily training, VIII 25— of brutes, V. 703, XI, 762 See Ethi-cal Philosophy, Metaphysics, Mental Diseases, Moral Philosophy, Phrenology, Brain.

MINDANAO, or Magindanao, island, XV 36; XVII 512.

MINDEN, XV. 36—battle of, V 498; XXI 714.

MINDORO, Island, XV. 36; XVII. 512. MINEHEAD, in Somerset, XV 36. Miner See Sappers and Miners.

MINERAL WATERS, XV 37-of AIX, II 431 —Carlsbad, VI 241—Dei byshire, VII. 755—Devonshire, 763—Down, VIII 122 —Germany, X. 584—Leamington, XIII 303-Malvern, XIV. 119-Moffat, XV. 297 — Monaghan, 409 — New York, XVI. 215—Papal States, XVII 242— Pyrenees, XVIII. 700-of Russia, XIX. 549—kingdom of Saidinia, 433, 434— Switzerland, XX. 889—Spa, 457—Teflis, XXI. 193—Tunbridge, 363—Wurtemberg, 938—Wicsbaden, 860. See Baths, and the geographical articles generally. principles, in living bodies, XVII.
 degeneration, in pathology, 691, 696-concretions, 691.

- manures, II 412. MINERALOGICAL SCIENCE, XV. 40

MINERALOGICAL SCIERCE, XV. 40
MINERALOGY, XV. 40—use of the blowpipe in, IV 791, 792—crystallization,
VII. 545; VI. 445—Dolometus' classification of minerals, VIII 97—Hauy
on, XI 244. See Minerals, Geology, Mines

Minerals do not grow, III. 169-active molecules found in, 205-Bayens' analysis of IV. 523-not fitted for nutrition III. 179-phenomena of, when treated with the blow-pipe, IV. 792, 794bution of mineral products, XVII 618—hardness of, XIII 231, XI. 226—cutting and polishing, XIII. 231-pyro-electricuty of, VIII 529, 557-electricity of, 538, 539-electricity produced by pressure on, 562; and by cleavage, 564-phosphotescent effects of electricity on, 598, 599-magnetism of, XIV. 26, 27-micro scopic cavities in, 806—distinguished from rocks, XV. 131—mineral constituents of timber, XXI. 268—of Cornwall, VII. 407—Europe, IX. 386—of Missouri State, XV. 280—of Prussia, XVIII. 668 See other countries; also

Mines, Mineralogy, &c.
Miners, diseases of, XIV. 442—combinations among, VII. 163—laws relating to, XIV. 349-their tools, XV. 224-effects of want of light on their complexions, XIII. 460

MINERVA, XV. 219-ancient statue of,

XIX. 854. MINES AND MINING, XV 219-blasting rocks, IV. 755; V. 45-mining pumps, XIL 176; XX. 575 et seq., 611-ancient mines, VII. 188—temperature of, VI. 778—colonization with the object of profit from, VIL 145-damps in, 643expeditious methods for obtaining the results in cases of complicated directions, VIII 840-gunpowder for, XI. 152the proper heat of the globe manifested by the increase of heat in mines. I. 949 -circulation of air in mines, XVIII, 77 extraction of noxious air from, 80-application of Hero's fountain to the draining of, 86-mines of America, II. 705the Andes, III. 129—Austria, IV. 313—Bavana, 517—Bolivia, 824—Brazil, V. 283, 284 -Burmah, 779—Cardiganshire, VI 233-Chile, 548-Cornwall, VII, 407 -Cuba, 566-Cumberland, 577-Derbyshire, 754-Devonshire, 763-England, VIII. 725—France, X 249—Hayti, XI. 255—Greece, 14—Hungary, XII. 17; IV. 318; V. 46—Illinois, XII. 362—

# MIN-MIR

Ireland, 506, 507-Norway, XVI 322-Russia, XX 542, 550—Spain, 489—Sweden, 862—Persia, XVII 422—Portugal, XVIII. 394—Tibet, XXI. 247. See Precious Metals, Collieries, Gold-mines, Iron-mines, &c., and the geographical articles

MINES. military, XV 249-gunpowder for, XI 152.

Minette, rock, XV. 137. MINGRELIA, XV. 249-coast of, IV. 745 MINHO, river, XV. 249; X. 372; XVII 647 · XX 487

province, XV 249; IX. 266.
MINIATURE PAINTING, XV 249. Minie rifle, XI. 101. Mining, XV 219. Minion type, XXI, 401, 403

Minion-Nonpared type, XXI 461.
Minium, XIII. 302, XV 112.
Mink, m zoology, XIV. 157.
Minnesingers, poetry of the, XVIII. 118, 264.

MINNESOTA, in United States, XV, 249 Minnow, XII. 256-angling with, III 156 -angling for, 161-its slow growth in confinement, XII 222, n

MINOR, in music, XV 250.

— a, in law, XVII 275

MINORCA, XV. 250—conquered by the French in 1756, V 463—captured by the British in 1798, 565—weights and measures, XXI. 812.

Minotaur, XV 251; IV 192; XIII 141. Minous, genus of fishes, XII. 283. MINSK, in Russia, XV. 251, XIX. 521. MINSTREL, XV. 252; XIX 257 et seq.

MINT, of Great Britain, XV. 253; VIL 68; XIII. 662-ancient constitution of. VII. 73-new constitution of, 81-routine of its business, 84-amount of gold and silver coined at, from 1816 to 1853, 95-amount of money coined at, XIII

662—mint-mark, XVL 353.
— of Bogota, IV 810—of Paris, XVII. 282—of Sydney, New South Wales, XX. 897—of the United States, XXI 427. master of the, VII 80.

plant, V. 202—oil of, XVI. 496. Minto (Lord), on the State of India, XI. 522.

(Lord), his mission to Italy in 1847, XII 656, 657; X 230. Minton and Co, their porcelain works,

XVIII 437, 441.

Mrwcrus (Felix), XV. 253—his campaign against Hannibal, VI. 295.

Mrwer, dance, XV 253

Minx, in zoology, XIV. 157-its fur, X. Miocene period, in geology, XV. 214-

flora of, V. 237

Mionnet's scale, XVI 353—his work on ancient medals, 360, 384. Miorchinus, genus of insects, IX. 140.

MIOSEN, lake, XV. 253. MIRABAUD, (Jean-Baptiste de), XV. 253 MIRABEAU, (G. H. de Riquetti, Comte de),

XV 232; X. 41 et seq.; XIX. 234-his connection with Cahania VI, 45: and with Dumont, VIII, 241, 242-his death and character, X 59-his friendship with Talleyrand, XXI. 9.

(V. R., Marquis de), XV 262. Mirabilite, mineral, XV. 97.

MIRACLES, XV. 262-pagan, L 466-necessary to prove a divine revelation, 499; XV. 302-marvellous victory of the thundering legion of Antoninus, III. 280 and n -healing at the pool of Bethseda, IV. 687-considered as conducing to the propagation of Christianity, VI. 638; X 615, n.—Hume on, XII. 7 and n. 3; IX. 417; XV. 264—of Jesus, XII. 762-Mohammed made no pretensions to the power of working miracles, XV. 302-miraculous gifts in apostolical times, I. 489. Mirage, XIV. 683—in Ireland, III. 285-

Egypt, VIII. 422-Beykaneer, IV. 690-

### MIR-MIT

lateral, XVI 691 - now classed with pseudo-apparitions, III. 315. MIRAMICHI, river, XV 267.

MIRANDA (Don Franciso), XV. 267 - (SAA DE), Portuguese poet, XV

MIRANDOLA (Giovanni Pico della), XV.

Mirbel (M), on the physiology of plants, V. 102.

MIRECOURT, town in France, XV. 268. MIREPOIX, town in France, XV 268 MIREVELT (Michael Jansen), XV 268 MIRGOROD, town in Russia, XV 268 Miriam, sister of Aaron and Moses, XIV.

Miriki, monkey, XIV 142 Mirror, XV. 268—colours of, VI. 650 divination by, 339 - in kaleidoscopes. XIII 39—foliating of, IX. 750—burning mirrors, VI. 1; XI 275; XIII 451 -for lighthouses, paraboloidal, 468, spherical, 471; curved, 474; catadiop tric, 478-colours of concave, XVI. 619 -mirrors for radiating heat, XI 262, 275-reflection of light from, XVI 553, 554-spherical aberration of, 574-cy lindrical, 556, 696

MIBZAPORE, town in Hindustan, XV 268 Miscopus, genus of insects, IX. 195. MISENUM XV 268

MISHNA, XV. 269; XII. 777; XXI. 15, 16 Miskolcz, town in Hungary, XV 269. Misletoe, V 195—cells of, 66—veneration for among the Druids, VIII. 184, 188 time of cutting it, 186-ceremonies at the cutting of it, 184; II 425.

order of plants, V. 195. Misphragmuthosis, XI. 387. Mispickel, mineral, XV. 115. MISSAL, XV. 269, XIII. 516. Missel-thrush, XVI 752

Misselden, on political economy, XVIII 215, 216,

Missions, Religious, XV 269—in Abyssinia, IL 56—America, 693—Asia, III 753— China, VI 570, III 753—Ceylon, 898— Brazil, V. 281 et seg. Japan, XII. 697

—Labiador, XIII. 141—New Zealand,
XVI 238—Polynesia, XVIII 270, 272,
273, 275, 276 et seg.—Paraguay, II. 691,
692—of the Scottish Established Church, XVIII. 494-of the Free Church, 495 of the Moravian brethren, IV. 813 - of the Jesuits, XII 754 - illustrations of geography from, X. 468 -to Asia, in the middle ages, 469—capacity of the indigenous American tribes for receiving Christianity considered, II. 692. See the geographical articles

Mississipi, state, XV. 277; XXI. 419 debt of, 428-wine of, 888-repudiation of debt by, 441.

- river, XV. 278; XVII. 604, 647; XIX 182 source of, XV. 260—its navigation, II. 675; XVI. 62—its deposits, XV. 141—bars m, 80—delta of, XVII. 586, XIX. 207—physical characteristics of, XVI. 84—basin of, XXI.

scheme, XIII. 293 Missolonghi, Lord Byron's death at, VI 40.

MISSOURI, state, XV. 280, XXI 419-debt of, 428-compromise, 440-wine of,

- river, XV. 281; XVII. 604, 647 Mist, XIV. 657—river mists, ib See Fog.
Misterton Carr, trigonometrical base on, XXI. 331, 334. Mistral, wind, V. 241; XIV. 470; XXI.

523. Mistress of the Robes, XI, 776. Misv. mineral, XV 97

MITAU, town in Russia, XV. 282. Mitcham, in Surrey, perfumes manufac-tured at, XVII. 408, 409—its flowerfarms, XX 836.

Mitchell (Dr), on the complexion of the Spanish Americans, VII. 224—on the health of factory operatives, XIV. 253.

(Dr), on the manufacture of sugar,

## MIT-MOD

Mitchell (James), a blind and deaf boy, VII 688; XVII. 677.

 (James), his attempt to assassinate Archbishop Sharp, V. 429; XX. 93-his execution, V. 430.

—— (Mr), his analysis of claystone and blackband iron ore, XII 540

(Mr), his screw piles, XX. 728 (Rev. Mr), his experiment on the

density of the earth, I. 834 - (Sir Thomas Livingstone), XV

282-his explorations in Australia, IV 256, 257

(Thomas), philologist, XV 282. Mitchell's patent ropes, XIX. 409 Mitchelstown, in Cork, XV 282.

- caves, in Tipperary, XXI. 286 Mites, III. 387-generation of, 175-their tenacity of life, 176-cheese-mite, 368.

Mithias, Persian deity, mysteries of, XV. 753

MITHRIDATES, XV 283; III. 615; VI 222; XVII 310, XVIII 292, XIX 322, 323 -orthography of the name, VIII. 471, n. Mitla, antiquities of, XIV. 725

Mitlan, runs at, XIV 719 Mitra, genus of mollusks, XV 385—fossil, XVII 110.

Mitie, in architecture, III. 510. Mitre-shell, XV. 385.

Mittes, in heraldry, XI. 336.

MITROWICZ, Austrian town, XV 285. Mitschenlich (Prof), on optics, XVL 545,

658, 681, 682, MITWEIDA, town in Saxony, XV. 285. MITYLENE, XV. 285; XIII 842—war with

Attica, IV. 194-razed by the Thebans, 204 See Lesbos Miyanganj, town in Oude, XVII. 18.

Mizraim, VIII. 45, 419. M'Nab (Mr), on the culture of heaths. XI.

757. M'Naught (William), his compound beam-

engine, XX. 607 Mnemeidæ, zoophytes, XXI, 1001.

MNEMONICS, XV. 285 MNEMOSYNE, XV. 287.

Mneuis, Egyptian deity, XI. 385. Moa, gigantic New Zealand bird, XVI. 233.

- ISLE, XV 288 MOABITES, XV. 288. MOAT. XV. 288.

Moating, process in woollen manufacture, XXI. 921.

Moawiyah, III. 363.

MOBILE, town in United States, XV. 288. - river, II. 436.

Mobilier, Crédit, XV. 289. Moccasin, XX. 208.

Mocha, Arabian seaport, XV. 293; III. 355; XVIII 818-its coffee, III. 345weights and measures of, XXI 812. stones, II 231.

Mocking-bud, XVI 752; XVII. 633 rattle-snake attacked by, XIX. 69. Modalism, in theology, XXL 194. Modality, in logic, XIII 589. Mode. See Mood.

in music, XV. 706
MODEL, XV 293—in cannon-casting, VI 181, 184-modelling of statues, XIX. 844. Modeller, V. 754.

Modena, Duchy of, XV. 294-weights and measures of, XXI 812

- city of, XV. 296-academy of arts at, II 68—university of, XXI. 492—school of painting, XVII. 72

Modern, Hungarian town, XV 297. - history, and historians, XI. 542,

543, 548. Modestus, VII. 307.

Modesty, deficient in the blind, IV. 778. Modica, town in Sicily, XV. 297. Modillion, III. 510.

Modiola, genus of mollusks, XV. 348-fossil, XVII, 106.

MODULATION, in music, XV. 297, 780. Module, III 510.

Modulus of elasticity, L 874; II. 101; VL

#### MOD-MOI

Modulus of a machine, XIV 404. Modum, in Norway, XV 297 Modumite, mineral, XV. 116. Mœatæ, VI. 74. Mochsen (Dr), on mortality, XV. 603.

Moln, Island, XV. 297.

Moeris, XV. 297 — Egyptian lake, VIII 430, 503 Mœsia, XV. 297. MOFFAT, XV. 297—mineral wells of, VIII. 238; XV. 37.

Moffeta, II. 732 MOGADOR, in Morocco, XV. 297, 596 MOGHILEY, or Mohileff, in Russia, XV. 298; XIX 521.

Mogi-Das-CRUZES, in Brazil, XV 298 Mogoo, in Persia, XV 298 MOGRIDGE (George), XV 293. Mogul empire, III. 745, 746; XI 475, 478

-decay of, 480-taxation under, 510 Moguls, XV. 298, XL 475 et seq; III. 745 et seq Monacs, town in Hungary, XV. 298-

battle of, XXI. 369. Mohair, XXI 906. MOHAMMED ALEE, XV. 298. See Mehemmet Alı.

- Bey, VIII. 488.

Mohammed, prophet, XV. 299—works on his life and character, 300, 301—Pri-deaux's Life of, XVIII. 512

— Abu Abdalla, XX. 463.
— I., II., III., IV, Turkish emperors, XXI. 368, 369, 370, 372.
— (Dost), V. 667.

MOHAMIEDANISM, XV 299; IX 395—may

be regarded as one of the corruptions of Christianity, I. 534, n 2—advantageous to the Jews, XII 777—baneful effects of, XVII. 428—predestanation a doctrine of, XVIII. 477—era of the Hegira, VI 673, XI. 284. See Koran, Mohammed, Musselman.

Mohammedans, their number, XV. 308-- rarely converted to Christianity. 274-in India, XI 463; their connection with the rebellion of 1857, XV. 308; their conquest of India, XI. 478—feasts, their conquest of India, XI. 478—feasts, IX. 494—geography advanced by, X. 468—coinage, XVI. 391—circumcision practised by, VI. 732—their laws against usury habitually violated, XII. 428—their conquest of Egypt, VIII 474, of Persia, XVII. 436—in Jerusalem, XII. 747—in Russia, XIX. 529—their rule in Spain, XX. 461 et seq. 466—their prejudice agrainst the dissection of the human dice against the dissection of the human

body, 815. See Arabians, Saracens MOHAMMERAH, town in Persia, XV. 309. Mohawk Indians, IL 680.

- river, XVL 213-falls of, 214. Moheau (M.), on the population of France, XV. 604.

MOHILEY, XV. 309. See Moghiley. MOHILL, in Leitrim, XV. 309.

Mohl (Prof.), on the cells of plants, V. 66 et seq.—on vegetable respiration, 105 on the flow of sap in trees, 111-on Knight's theory of propagation from seeds, XI. 702, n.

Möhler on Mohammed and the Koran XV. 301, 302, 303,

Mohr on electrical induction, VIII. 557. Mohs, his scale of the hardness of mine rals, XV. 55-his arrangement of minerals, 67.

Mohsite, mineral, XV. 109. Mohun (Lord), his duel with the Duke of Hamilton, VIII. 231.

Moidore, Portuguese coin, XV. 442. Moigno (Abbè), on lamellar polarisation, XVI. 676—on conical refraction in France, I. 917, n.

More (David Macbeth), XV. 309—on the Saracenic school of medicine, XX. 816. Moira (Earl of), V. 554.

(Lady), on the manufacture of flax-cotton, IX. 656.

Moissac, town in France, XV. 310. Moisture, one of the chief elements in our notion of climate, XVII. 610—distribu-tion of, 613—its influence on health, XIX. 608; combined with heat, 609

## MOI-MOM

MOITTE (Jean Guillaume), sculptor, XV. 310 Moivre (A. de), XV 310 See Demoivre. Mokassin snake, XIX. 68. Mokha. See Mocha.

Mokrin, Hungarian village, XV. 310. Mola, or Mola di Bari, town in Naples, XV. 310

Molal, or Molay (Jacques de), XV 310

Molanus, V. 60 Molar teeth, in man, III 25; XVI 407, 409—in brutes, III 107. See Odontology

Molasses, XV 310; VI. 516; VIII 50; XX 792

Molbech (Prof.), Danish author, XIX 696. Mold, town in Flintshire, XV 311 Moldau, river, XV 311, XVIII 448

MOLDAVIA, XV 311; XXI 684—invaded by Mohammed, XII 14—weights and measures of, XXI 812

Molé (M), X. 202—his ministry, 212 Mole, in zoology, XIV 152; XXI 546, 547—its scapula, humerus, and carpus, III 81-peculiarities of its muscles, 92 -its fur, X 351-dentition, XVI. 450 shrew mole, XIV. 151—Cape mole, 

Molecular fluids, fibres, membrane, move-ments, XVII. 649—theory of organisation, ib.

Molecules, active or animated, III 205forms of, in crystallisation, VII 560molecule tissues, XVII. 649. Molesworth (Sil William), XV 313.

Molfetta, town in Naples, XV. 314 Molfere (J B Poquelin), XV 314—his comedies, VIII 156 MOLINA (Louis), XV. 318.

Molineux (Samuel), on the aberration of light, II 37

Mounos (Michael de), XV. 318, 757 Molise, province of Naples, XV 318; XX.

MOLITERNO, town of Naples, XV 318 Moll, town of Belgium, XV. 318.

(Prof.), his electro-magnet, XIV

on the invention of the telescope, XVI 527.

XVI 027.

Mollenesia, genus of fishes, XII 252

Mollusca, XV. 319, II. 772; IX. 60—
their organs of smell, III. 94—eyes, 96—nervous system, 105—structure, 185 -Lamarck's improved classification of, 183-characteristics and classes of, 185, 191, 192-Cuvier's arrangement of, ib -hermaphrodite, 171-kinds used as food, IX. 765-their arrangement in zones at various depths, 773-order of their appearance in the strata of the earth, XVII. 92-fossil, 103, 640-fossil genera of, 115—number known, 631—of genera vi, 119-humber known, 631-01 Madeira, XIII. 800 — distribution of marine, XVII. 636. Moloce, or Molech, XV 404 Molokai, island, XVIII 270.

Molossi of Epirus, IX. 277. Molossus, genus of mammalia, XIV. 148 Molten-grease, disease in cattle, XXI, 568 MOLTON (South), in Devon, XV. 404 Moluccas islands, XV. 404—language, XIII. 218—serpents, XIX. 73

Moluris, genus of insects, IX. 130. Molybdena-ochre, XV 112. Molybdenite, XV. 118. Molybdenum, VI. 494, XV 66 Molybdic acid, VI 494. Molyn (Peter), painter, XV. 405.

Molyneux (Lieut), on the Jordan, XVII. 186, 187,

(WILLIAM), mathematician, XV. 405-question regarding vision proposed to Locke by, XIV. 574, n. 2.

Mombas, African seaport, XV 405 Momigny on Hadyn's imitative music XV. 737.

Mommsen on the transition from a pastoral to an agricultural life, XVII. 538. Momotombo, volcano in Nicaragua, XVI. 242, 244,

Momparwa, in Borneo, V. 47

#### MOM-MOM

Mompox, town in New Granada, XV, 405 Moxus, XV 406. Mona, VIII. 183 See Anglesea Monacanthus, genus of fishes, XII 313 Monachism, XV. 406

Monaco, in Italy, XV. 409

Monads, Leibnitz on, I 131, 255; VIII

Monaghan, Irish county, XV. 409-agricultural statistics, XII 516, 517.

Monaichs, table of English, VIII 714

Monarchy, XV. 411, X. 733—Aristotle on, III 568.

Monas, genus of animalcules, III. 199. Monasa, genus of birds, XVI 778 Monasteer, in Tunis, XV 415

Monasteries, II 14-St Dunstan's exertion in favour of, VIII 262-many erected by king Edgar, 660-suppression of, in England, 702-bells used in IV 628transcription of MSS in, XIII 386chronicles written in, VII 535-in Jerusalem, XII. 747-in Fiance, X. 268

Monasticism, in Egypt, VIII 473—of the Buddhists, X. 722—a violation of religrous unity, I. 508, 509 Monastir, town in Turkey, XV 415.

Monaul, bird, XVI. 783. Monazite, mineral, XV. 101 Monazitoid, mineral, XV 101. Monboddo (Lord). See Burnet (James)

Moncey (B A. Jeannot), XV. 415 Monchen-Gladbach, in Rhenish Prussia,

Moncolieri, town in Italy, XV. 415. Moncreiff, (Sir H Wellwood), Scottish divine, XV. 415 — on the Secession, XVIII. 499

\_\_\_\_\_\_ (James Wellwood, Lord), XV. 416.
\_\_\_\_\_\_ hill, in Perthshire, XVII. 457.
Monday, VI 75; I 458, n 2.
Mondego, river, XVIII 393
Mondino, or Mondini, anatomist, II 755;

XIV 458. Mondonedo, town in Spain, XV 416 Mondovi, Sardinian town, XV 416 Mone (F. Joseph), early liturgies published by, XVIII. 210.

(Dr Fridegar), palimpsest of Pliny discovered by, XVII 214 Monedula, genus of insects, IX. 195 Moneta, name of Juno, XIII. 20. Monetagium, hearth-tax, XV. 435.

Moneela oil, XVI 496 Money, XV. 416—ancient British, VII 69 -Japanese, XII. 696-modern Egyptaan, VIII 517—Greek, XI 15; XVI 358, 359—French, X. 284—Norwegian, XVI 328-Phœnician, 358, 359-Ionian ıslands, XII. 446-Aristotle on, III. 569 -a country no richer by keeping, VII 146—notion that money constitutes wealth, 192—money-table, III. 584 substitution of gold for silver, as money, XVIII 473, 474—invested in railways, 785 See Com, Currency, Paper-money, Precious Metals, Interest.

Order Office, XVIII 413—amount

of money-orders issued, ib .-- conditions to be observed, 418 — money-orders issued in Scotland, 414; in Ireland, ib. Money-cowry, XV. 384. Moneyers, VI 73, 74

MONFLANQUIN, town in France, XV 494. MONGE (Gasper), XV. 494: I. 701. n. 3on capillary attraction, XII. 94, 95, 97on drops, 102—his Descriptive Geometry, 805—on mechanics, XIV 384, 391. Mongerr, in Hindustan, XV 405.

Mongolia, in Asia, XV. 495; III. 731-Felix, 732.

Mongolian variety of man, IL 775; XL 541; IX. 844—its branches, II 776—language, IX. 889—Mongolian skull, III 29.

Mongols, XIII. 217; XV. 495. See Mongolian

Mongrel dogs, XX. 219. Monumaces, nat order of plants, V. 204. Monutor, genus of reptiles, XIX. 27. Monitorial system of teaching, XV. 827. Monx (George), Duke of Albemarle, XV. 496-his proceedings in reference to

## MON-MON

the restoration of Charles II, V. 419; XIII. 168; created duke by, II 420his recommendation of Loid Stail to Cromwell, VII. 628 Monk-fish, XII. 313

Monkey-pot order of plants, V. 192.

—— plant, V 136.

Monkeys, XIV. 139, 140—voice of, III.

101—their geographical distribution,

XVII 631

Monkland bindge, XII 605
—— canal, XIII 176, XIX. 808,
MONKS, XV. 497—their services to learning, X. 507; VII 535; XIII 386—their hymns, XVIII 108

Monkshood, plant, V. 123, 180; II 96 See Acoustum

Monkwearmouth, in Durham, VIII 267bridge at, XX. 807

MONMOUTH (James, Duke of), XV 497; V 427—defeats the Covenanters at Bothwell bridge, 430-aspires to the Crown, 433-executed, 435.

English town, XV. 497.

MONMOUTHSHIRE, XV 497—population and value of property, VIII 754—great oak, in. XXI 270

Monnier (M Le), on electricity, VIII. 578. Monocentris, genus of fishes, XII 210, 283. Monochir, genus of fishes, XII. 272. Monochlamydeæ, sub-class of plants, V. 203

MONOCHORD, XV 500 Monochromatic illumination of microscopic objects, XIV 798

Monoclinohedric system of crystallisation.

XV. 48—twin crystals in, 58.
Monocotyledenous plants, V 76, 141, 179 stem of, 83—germination, 166—number known, 224—fossil species, 233—number described, XVII. 626.

Monoculus, genus of crustacea, VII 548 Monodon, genus of mammalia, dentition of, XVI 443, 444. Monœclous plants, V. 126

Monogram, XV. 500-of early printers, IV. 708.

Mono-ideism, XVII. 680 Monoistic hypothesis on the origin of evil, IX. 421

Monomachus, VII. 315. Monomania, XV 500; XIV 529, 530,

MONOMISE, in Southern Central Africa, XV 500

MONOMOTAPA, in Africa, XV 500. Monomyaria, genus of mollusks, XV. 344. Monophysites, heretics, XV 500, IX. 406. Monopleura, genus of mollusks, XV. 349 Monopoli, town in Southern Italy, XV.

Monopolies, in the reign of Elizabeth, V. 382—evils of, VII 195—of trade with colonics, 141—their influence on prices, XVIII 242—therrabolition necessary for the prosperity of commerce, XIV. 274 -of the Dutch Chamber of Commerce, II 600, n.—of the London theatres, VII. 168—in the woollen trade, XXI.

Monopteros, in architecture, III 510 Monopterus, genus of fishes, XII. 231 Monostoma, genus of entozoa, XXI. 979. Monostomatidæ, zoophytes, XXI 1001. Monosyllabic language, XIII. 198, 199people using, IX. 344.

MONOTHOLITES, heretics, XV. 501.

Monotis, fossil mollusks, XVII. 106. Monotomo, genus of insects, IX. 142. Monotrema, tribe of mammalia, XIV. 19. Monotriglyph, III 511.

Monotropaceæ, nat. order of plants, V.

Monradite, mineral, XV 80 Monro (Dr Alexr.), primus, XV 502; XX. 819—his Elements of Anatomy, II. 767; III 73-first clinical lecturer in Edinbuigh, XIV. 462; XX. 819. n. 4.

(Dr Alexr.), secundus, on the lymphatics, II. 766—on the amount of fluids within the cranium, XVII. 698. - (Dr), on echinoderms, XXI. 988. MONROE (James), president of United

#### MON-MON

States, XV. 502-his political doctrine, XXI. 440

Monrovia, town in Africa, XV. 502. Mons, town in Belgium, XV 502 Monselice, town in Austrian Italy, XV.

Monsoon, XV. 503; III. 737-in Afgha nistan, II. 202—Africa, 216—Ceylon, VI. 392—India, XI 451—Sumatra, XXI

MONSTER, XV 503; XIV. 426. MONSTREAT (Enguerrand de), XV 504 MONT BLANC, XV. 509; II. 624—ascents of, 627, 628—height, XVII. 642

- Cenis, XIX. 633—road over, 288 DE PIÉTÉ, XV 504.

Montacuta, genus of mollusks, XV. 350 Montagnana, town in Austrian Italy, XV.

Montagu (Basil), Queen's counsel, XV 504.

- (LADY MARY WORTLEY), XV 505 -style of her letters, XVIII 327, 328 (EDWARD WORTLEY), XV 505 his Ornithological Dictionary, XVI.

733, 815 on the annelides, XI. 294 et seq. Montague (Charles), XVI 207

MONTAIGNE (Michel, Seigneur de), XV 506 -his ments as a writer on the philosophy of mind, I 49-had little scientific knowledge, 50—predisposed to sceptr-cism, 10 , XIX. 709—his education not neglected, I. 50, n.—character of his sceptroism, 51—radical fault of his understanding, ib .- his Apology for Raimond de Sebonde, ib.—died a Roman Catholic, ib and n. 1—his opinion of Sebonde's Theologia Naturalis, 52-poetical description of, by Voltaire, 53, n 1 -reason why his name should be united with that of Rochefoucauld, 55-effects of his Maxims on the higher orders, 56

Montalegre, town in Biazil, XV 507 Montalembert (Marc-Réné, Marquis de), engineer, XV. 507—on fortification, IX. 816, 835

Montahvet (M), X. 212.

Montalvan (Juan Perez de), dramatist, XV. 507.

Montanara, town in Piedmont, XV 508. MONTANCHES, town in Spain, XV. 508. Montanus, founder of the Montanists, XV. 508.

MONTARGIS, town in France, XV, 508. Montauban, town in France, XV. 508-

population, X. 277. Montbar, bucaneer, V 710.

MONTBELLIARD, town in France, XV. 509; VIII. 114

Montblanch, town in Spain, XV 509. Montenison, town in France, XV. 509. MONT-DE-MARSAN, town in France, XV.

Monteagle (Lord), on the loan for the Russian war, X. 342—his protest against the repeal of the newspaper stamp duty, XVL 191

Monte Bolca. See Bolca, Monte

- CHIARO, town in Lombardy, XV.

Rosa, XV. 512; II. 624, 627-height of, XVII 642. San Giuliano, in Sicily, XV. 512.

MONTECUCULI (Raimondo, Count de), XV. 510. - (Sebastiano di), XV. 510.

MONTEFIASCONE, town of Italy, XV. 510 MONTEFORTE, town of Naples, XV. 510 MONTEGO, town in Jamaica, XV. 510. - Bay, XII. 677.

Montegre (M.), on the earth-worm, XI 301.

- chimerical figure in heraldry, XL

(M. de), his works on animal magnetism, XX. 424, 425. Monteith (Col), on the Caspian Sea. VI

MONTELEONE, town of Naples, XV. 510. MONTELIMART, town of France, XV 511. Montemayor, poetry of, XVIII. 114. Monten (Dietrich), XV. 511

## MON-MON

MONTENEGRO, Turkish state, XV. 511 Montepetit (M), on iron bridges, XII 577. MONTEREAU, in Flance, XV. 512-battle of, X. 167.

Monterey, town in Mexico, XV. 512, XIV. 728—taken by the forces of the United States, 714

Montesquieu (Charles de S Baron de), XV. 512-main object of his work on the Spirit of Laws, L 94-first connected jurisprudence with history and philosophy, ib -examples of his peculiar style of thinking, ib., n 2—his speculations directed to the practical conclusion pointed out by Bacon, 95his Spirit of Laws gave the first blow to the study of natural jurisprudence, ib.—on natural religion, 277—on a historical work by the Abbé Dubois, VIII. 227-on usury among the Romans, XIL 428—on the law of nations, XIII. 280—on a standard of value, XV 419

MONTEVERDE (Claudio), musician, XV. 515

—— (General), IV 817.

MONTE-VIDEO, XV. 515, V. 602—weights and measures of, XXI 812.

Montezinho, Sena de, XVIII. 393 Montezuma, Mexican kings, VII. 418, 419, XIV. 701, 702.

MONTFAUCON (Bernard de), XV. 516-on Roman aqueducts, III 339-on paper, XVII 248, 249.

Montfort, in France, XII 361 (SIMON DE), XV. 516, VIII. 679
Montgaillard (M), on the character of Moreau, X. 132, n 2-on the escape of the Emperor Alexander at Austerlitz,

140, n. 1. Montgery (M de), on artillery, III 698

Montgolfier, balloon invented by, II 173 et seg-his ascent in one at Lyons, 176. Montgolfier's hydraulic ram, XII. 75, 173;

(JAMES), poet, XV 516-his hymns, XII. 189.

(Rev ROBERT), XV. 517. town in United States, XV. 518.

town in Wales, XV 517

MONTGOMERYSHIRE, in Wales, XV 518 population and value of property, VIII. 754—lead mines of, XV. 245.

Month, VI. 75—Jewish, 670—Egyptian, ib; VIII. 450—Syrian and Macedonian, VI. 671—Ethiopian or Abyssinian, 673 -Armenian, ib -Mahommedan, 674-Persian, 675-Chinese, ib -Indian, 676 -Greek, 76 - Roman, 1b - Druidical, VIII 186-different kinds of lunar, IV. 38-names of Attic months, VI. 666 Dupuis' theory on the origin of the Greek months, VIII 263

MONTI (Vincenzo), poet, XV. 518. Monticellite, mineral, XV. 89.

MONTIVILLIERS, town in France, XV. 519 Montlivaltia, fossil corals, XVII 97. MONTLUCON, town in France, XV. 519.

Montmartre, XVII. 280-gypsum of, XV. 148-fossil animals found in the quarries of, XVII. 639.

Montmirail, battle of, X. 167

Montmorenci (Philip de), Count Horn, XI. 563 et seq.
MONTMORENCY (Anne de), constable of France, XV 519.

- (HENRI II., Duc de), XV 520

order of knights connected with the house of, XIII 121.

MONTMORILLON, town in France, XV. 520. Montmort (Remond de), on chances, XVIII. 589, 603.

MONTOIR, town in France, XV. 520. MONTORO, town in Spain, XV. 520. MONTPELIER, town in United States, XV

520. MONTPELLIER, town in France, XV. 520; XI. 342-swarm of ants at, III. 265 perfumery of, X. 256—population, 277—university of, XXI. 448

## MON-MOO

Montpensier (Duc de), X. 222; XX. 482 Montravel (M Tardy de), on magnetic somnambulism, XX. 424.

MONTREAL, XV 521, VI. 133--climate, 139 140—population, 144—tubular bridge at, 155—disturbances at, in 1837, 159. MONTROSE, XV. 524

—— (Marquis of), his victories in Scot-land, V 405—defeated at Philiphaugh, 407-executed, 413

Monts de Piété, m Paris, XVII. 283; Belgium, IV 624. See Pawn-Office MONTSEERAT, West Indian island, XV. 525.

MONTUCIA (Jean-Etienne), mathematician, XV. 525-on Descartes and Harriot, II. 486-on the arithmetic of sines, 547 on the claims of Newton and Leibnitz to the discovery of fluxions, IX. 673

Monument of London, XIII. 675. Mood, in grammar, X. 766, 768 et seq Moodker, in Hindustan, XV 525. Moods of the syllogism, XIII 613, 615, n,623

MOOLTAN, or Moultan, province of Hindustan, XV 525

city, XV 525—capture of, by the British in 1849, V 671—silks of, XI

Moon, XV 526; IV 31, 88—gravitation and revolution of, I 676—Newton's theory of, a work of genius almost superhuman, 779—acceleration of, 814, II. 74; IV. 37, III 812; XIII. 233—Hipparchus' discovery of the period of her revolution, III. 791-Ptolemy's discovery of her evection, 792—Mayer's lunar tables, I. 781, III 811; XIV 369 -her oval and large appearance in the horizon, IV. 10-phases, 32-parallax, 33 — magnitude, 1b — orbit, I 833; IV. 33, 35, 38, 88—harvest moon, 34—equation of the centre, 36—evection, -variation, ib -annual equation, ib -horizontal moon, IV 10-inequalities of her motion, 37; IX. 378—rotation of, IV 39-hbration of (see Libration) -nature of her substance, 41-spots, 42 -atmosphere, 43-eclipses and occulta-tions, 45-extent of her shadow and penumbra, 48-tables for calculation of new and full moon, 120-application of the tables, 134-lunar months, 38year, VI. 79-cycle, 81-Chinese festival at full moon, 570—tables of the moon's latitude in eclipses, IV. 129, 130-augmentation of, XVI 39-meridian passage, ib —Leslie on her light, IV. 41: discovery of heat in, XIV 485 -passages of the moon over the mendian, 689; by lunar distances, ib influence of, on the magnetic needle, 14: XVII. 618—fancied coldness of her rays, VII. 101, 766-how to take the altitude of, XVII, 32-regard paid by the Druids to her revolutions, VIII. 186 - theory of the lunar origin of meteorolites, XIV. 613-luminous circles surrounding, see Corona, Halo, Chromatics-lunar theory, I 814 et seq, 825 et seq, 849—moon's influence on the tides, XXI 249; XVII. 580

Moon's system for the bland, IV. 782; XVIII. 554

Moonseed order of plants, V. 181. Moonstone, XV. 70.

Moor, town in Lower Hungary, XV. 526

- (James), XV. 526.

Moorcroft's journey to the Himalaya mountains, XL 447-on certain Indian animals, 455.

Moore (Edward), dramatist, XV. 526

— (Dr John), XV. 527.
— (Sir John), XV. 527.—his expedition to Sweden, V. 603—his Spanish expedition, 604—retreat to Corunna and death, ib , VII. 421; XXI. 706,

(THOMAS), poet, XV. 530—his duel with Jeffrey, XII. 717—his poetry, XVIII 126—his Epicurean, XIX. 282 on Sheridan, XX. 108, 109.

#### MOO-MOR

Moore or More (Roger), rebellion of, V. 398; XII 481

(Sir Jonas), IX. 653

—— (F), on Asiatic silk - producing moths, XX, 289, n.

Mooring anchors, III. 118.

Moors, XV. 538-of Africa, II 220, 226; XV. 595-Algiers, IL 566, 569-their academies in Spain, 61 - architecture, III 449-ballads, XVIII 113-pottery, 431 See Arabians, Moriscos, Saracens. MOORSHEDABAD, in Hindustan, XV. 534, IV 651.

Moorsom (G), on tonnage, XXI 304, 307. Moorsom's (Capt.), percussion fuze, XI.

Moose, in Asiatic Turkey, XV 534. Moplays of Canara, VI 162. Moquette carpets, VI. 272.

Moquin-Tandon on leeches, XI. 303 et

Mora, town in Spain, XV, 534, Morabin (M), on Bellenden's work on the affairs of Rome, IV. 637.

MORADABAD, in Hindustan, XV. 534. Morames of glaciers, IL 625: X. 635, 636:

XV. 139; XVII. 603-among the Himalayas, XI 443.

Moral education, XV 811.

faculty, XIV 580 — necessity of moral judgments, 599 - moral treatment of mental diseases, 537-moral sense, XV. 544-moral obligation, 563, XIV. 620.

law, XIII 253-Kant on, 48

perfections of God, XXI. 191 Philosopher, difficulties of, I. 310. Philosophy, XV. 535—little advance made in, prior to the seventeenth century, L 20—the Economists on rights and duties, VIII 376—Paley on, XVII.

200-Plato's system of, 807 - opinions of Sociates on, XX. 398, 401. See Ethical Philosophy, Ethics - proof of the existence of God, XXI.

MORAL-DE-CALATRAVA, town in Spain, XV. 534.

MORALES (Ambrosio), XV. 575.

(General), IV. 818

(Luis), painter, XV. 575.

Moralities, religious plays, VIII. 144 Morality, Christian, VI. 678-the real in, XIV. 622-reciprocal influence of mo-

rahty and law, XIII. 259-standard of, XIV. 621 and n. 1-poetry conducive to, XVIII. 91-under the law, L 482; under the gospel, 483—as taught by Socrates, XX. 396, 397.

Morals, medical, XIV. 464 Morano, town of Naples, XV. 575. MORAT, Swiss town and lake, XV. 575. MORATIN (L. Fernandez), Spanish drama-

tist, XV. 575. (N. FERNANDEZ), Spanish poet, XV. 575.

MORAVA, river, XV. 576. Moravia, province of Austria, XV. 576, IV. 310, 309.

MORAVIANS, XV. 576; IV. 812-origin of, XXI 971-constitution of their churches. XVIII. 486-missions to Labrador, XIII 141-in Scotland, XIX. 801.

Moray, or Elginshire, XV. 576—Firth, XIX. 794—floods in 1829, XVII 600 agricultural statistics, XIX. 796, 797, 798-population, 799.

Morbid growths, in physiology, XVII 690 -theory of, 694-origin and development of, ib .- propagation of, 695decline of, 696.

Morbinan, department of France, XV. 577.

MORCELLI (S. Antonio), antiquary, XV.

MORCONE, town of Naples, XV 578. Mordan (Messrs), their locks, XIII. 585. Mordants in dyeing, VIII. 278—in calicoprinting, 315.

MORDAUNT (Charles), Earl of Peterborough, XV. 578; XX. 59.

Mordecai (Captain), on gunnery, XI. 105,

### MOR-MOR

MORDEE BAY, XV. 579. Mordella, genus of insects, IX. 134. Mordellones, family of insects, IX. 133. MORE (HANNAH), XV 579.

(HENRY), XV. 580-accuses Descartes of nullibism. L. 246. (J. S), his edition of Stair's Institutions, VIL 630.

(Roger). See Moore (Roge1)

(Sir Anthony), portrait-painter, XV. 579, 593,

of, 1 232—aneodote of, IV. 528—character of, I 232—aneodote of, IV. 528—his execution, VIII. 700—his patronage of Holbein, XI. 559.

Monea, XV. 584; XI. 12—silk produced

ın, XX. 278.

MOREAU (Jean Victor), XV. 584, X 101 et seq, 129, 131—his campaign of 1796,

MORECAMBE BAY, XV. 585.

Morel, edible fungus, V. 217.

(M.), his definition of insanity, XIV. 526

Morelia, Mexican town, XIV 724 MORELL (André), antiquary, XV. 586.

—— (Mr), on human intelligence as

distinct from that of brutes, XIV. 559, n. 2—on vision, 574 —— (THOMAS), XV. 586

MORELLA, town in Spain, XV 586.

MORELLI (Guacomo), librarian in Venice, XV. 586.

Morelos (Jose Maria), his exploits, XIV 709—execution, 710. Morena (Sierra), XX. 487.

Moreri (Louis), XV 586 Moreschi on erectale tissue, II 800 MORESQUE, XV 586; III 340. MORETO-Y-CABANA (Augustin), Spanish

dramatist, XV. 586

Moreton Bar, XV. 587—penal settlement at, XVIII 578.

MORETON-HAMSTEAD, in Devon, XV. 587. MORETON-IN-THE-MARSH, XV. 587.

MORGAGNI (G Battista), XV. 587—his anatomical labours, II. 764—on the structure of the arteries, 791. Morgan, a bucaneer, V. 711.

— (Sir Charles), on the consumption of fish, IX, 630—his work on fishenes. 618, n. 1.

(Mr), on annuties and life assurance, III. 222, 223; XII. 399, 401—his account of the Equitable Society. III 224, 231—some of his tables criticised, 224-on mortality, XV 614.

(Mr), on the effects of electricity on animals, VIII. 602. (Mr), on Shakspeare's disregard

of the unities, VIII. 153.

(Mr de), on logic, XIII. 578, 580, n., 602, n.—on probability, XVIII. 591.

MORGARTEN, in Switzerland, XV. 587—battle of, XX. 884.

Morghen (R Sanzio), engraver, XV. 587
—reference to, VIII. 806.

MORNOF (Daniel George), XV. 588. Moriah, Mount, XII. 731, 736, 745 Monchini (Dr), on the magnetism of the solar rays, XIII. 452; XVI. 595. MORIEE (James), XV. 588—his account of

Persia, XVII. 421 et seq. Morillo, IV. 818.

Morin (M.), on breast-wheels, XII. 165experiments on friction, XIV. 405—colouring matter, VIII. 295.

Moringacese, nat. order of plants, V. 190. Moringua, genus of fishes, XII. 282. Moriscos, in Spain, their revolt, XX. 469 expulsion, 470.

Mork, Swedish romance writer, XIX. 701. Morla (Tomas de), on the velocity of cannon balls, XI. 133, n.

MORLAIX, town of France, XV. 588. Morland (George), painter, XV 588.

—— (Sir Samuel), XV 588—his baro-meter, IV. 454—on the speaking-trumpet, XXI. 360.

- (Samuel), on the pollen of plants, V 152.

Morlet on the magnetic equator, XIV. 57. Mormolyce, genus of insects, IX. 91.

## MOR-MOR

MORMONISM, XV. 589-residence of the Mormons in Utah, XXI. 498-places of worship in Scotland, XIX. 801 Mormyridæ, family of fishes, XII 251, 252. Mormyrops, genus of fishes, XII. 252. Mormyrus, genus of fishes, XII 252

MORNAY (Philippe de), XV 593 Morne (Lough), VI 273.

Mornington (Lord), XXI. 815. See Wellesley (Marquis of).

Мого (Attom), XV 593, 579. Могоссо, XV 593; П. 223—monarchy, XV. 413—heights of mountains, XVII 644—leather, XIII. 310—Spanish war with, XX. 484-weights and measures, XXI, 812.

- city, XV. 596 Moron, town in Spain, XV 597. Morosini (Francesco), doge of Venice,

XV 597. Moroxite, mineral, XV. 94. MORPETH, XV 598 MORPHEUS, XV 598.

Morphia, muriate of, V 182; XVI 518its poisonous properties, XIV. 436effect of, weakened by habit, XVI 128. Morphine, XVI 518.

Morphnus, genus of birds, XVI. 743. Morpho, genus of insects, IX. 208. Morphology of flowers, V 117. Moria, timber-tree, XX 172; XXI 277. Morren (Mr), on the pollen of flowers, V.

Morrhua, genus of fishes, XII. 268, 269, 270.

Morris (Corbyn), on mortality in London, XV 601.

 (F O), his work on insects, IX. 23.
 canal, United States, XVI. 56 DANCE, XV. 598.

Morrison (Robert, D D), XV. 599-on the Chinese language, VI. 571, 574—on the population of China, 587. Mors, island, XV. 599.

Morse, XIV. 173-ivory of, III 105. key in electrical telegraphs, XXI.

(Mr), his electric telegraph, I. 986, XXI. 101, 106.

Morshansk, town in Russia, XV. 599 MORTAGNE, town in France, XV. 599. Mortal sins, XXI. 201.

MORTALITY (human), XV. 600-law of, 631-rate of, in England, VIII. 755-in the navy, XVI. 106—in Glasgow, X. 656—not increased by manufactures, XVIII. 238-diminution of the rate of, III 229 - greater in males than in females, 230 - in foundling hospitals, IX. 845; XIV. 444-variations of, in different countries, XVIII. 351-in the United States, 340; XXI. 421, 422; Prussia, XVIII. 664; Scotland, XIX. 800; Sheffield, XX. 98—annual per cent in London and England, XIII 660registration of deaths, XVIII. 831. Annuities, Population, Probability.

MORTAR and Pestle, XV. 651. - kind of cannon, XV. 651, XI 141, 133-arrangement of, in sieges, III. 693 -table of ranges for, XL 147-for throwing a line over wrecked vessels, XIII. 442

in brick and stone building, V 732, 733, 738; XX 713—1ts transverse strength and power of resistance, 717, 718—connection formed by mortar of lime or gypsum, VI. 381

MORTARA, town in Italy, XV 651.
MORTER (E. A. C. Joseph), marshal of
France, XV. 651, X. 166 et seq., 211 Mortification, XVIL 690

MORTIMER (John Hamilton)), XV. 651. on husbandry, II. 259. (Earl of), VIII. 682.

Mortise and Tenon, VI. 264; XII. 810mortising, V. 747.

Mortlach, battle of, XIX. 745. Mortlake, in Surrey, its tapestry, XXI 20. MORTMAIN, in law, XV. 651. MORTON (Cardinal John), XV. 653

(Earl of), regent of Scotland, XIX

## MOR-MOT

Morton (Mr), on storing mangel-wurzel, IL 320

- (Thomas), dramatist, XV. 653 (Di S G.), on the abougines of America, IL 677—his collection of skulls, XVII 563.

Morveau. See Guyton-Morveau Mosaic work, XV 653, XVII 59

- Dispensation, I. 466-law, 167limited to one nation, that of Israel, 1b, 468-abolition of, 468-a system of temporal rewards and punishments, 470 -does not teach the doctrine of future retribution, 475, 478-distinguished by the multitude and minuteness of its regulations and observances, 469; the object of these, 1b -its ceremonial and civil laws, 1b—typical meaning of its ceremonies, 470—summary of its characteristic features, 479-not binding on Christians, 469, 479 Moscas, II 683

Moschopulus on magic squares, XIII 810. Moscaus, Greek poet, XV 653.

genus of mammalia, XIV. 205-dentation of, XVI 466, 479.

Moscow, XV. 653—burnt in 1812, X. 157 -burnt by the Tartars, XIX 474-bells of, IV. 629—roof of large span at, XIX. 393, 394—university of, XXI. 492

a Russian government, XV 657;

Moseirah, island, XV 657 Moseley (Rev. Henry), on mechanics, XIV 380, 381, 404, 418—on the stability of floating bodies, XX. 156, 157.

Moselle, department of France, XV. 657; XIV 697-wine, specific gravity of, XII. 89

river, XV. 658; XIX. 144, 145; XXI 672

Mosely (Prof), on hydrodynamics, XII 76—on Appold's pump, 180—on Self's pump, 175.

MOSER (Johann Jacob), XV. 658. - (Justus), XIII 726

on magnetism, XIV. 13
Moses, XV 658; XII. 766; XVII. 193objections to his account of the creation, I. 455-makes no mention of a future state, 473-revelations probably made to, which were not intended for all the people, 474—his account of the deluge, VII 721—whether the author of the Pentateuch, XVII 400—psalms ascribed to, XVIII 679—sanitary influence of the laws of, XIX 602—slavery authorised by, XX. 319—law of, on divorce, VIII 67. See Mosaic Dispensation

- a kind of boat, IV. 800. Mosneim (J. Loienz von), XV. 659the theological system of Luther, I. 21 —on ancient mysteries, XV 755. Moshesh, Kafrarian chief, XIII. 35 Moskonisi, island, XV. 660.

Moslem. See Mussulman Mososaurus, fossil reptile, XVII 640. Mosotti (M), on the micrometei, XIV. 747—on optics, XVI, 550.

Mosque, XV 660. Mosquito, insect, IX. 224—in Northern Asia, III. 741.

- shore and coast, XV, 660. Indians, in Honduras, XI. 610. Moss, order of plants, V. 216.

Mosses, XV 665-organs of reproduction, V. 144—Irish moss, 218—rock, 217—rein-deer, ib—Iceland, ib.—region of, 227; XVII. 627-Dellenius' Historia Muscorum, VIII 30.

in Lancashire, XIII. 177. See Bogs.

(J. W.), his work on classical bibliography, IV. 711. Mossman on the colony of Victoria, IV.

288. MOSTAGANEM, town in Algeria, XV. 665. Mostar, town of Bosnia, XV. 665.

MOSTEN, in Wales, XV. 665. Mosul, Turkish town, XV. 665; XVL 272.

Motacilla, genus of birds, XVI. 756. Motala, in Sweden, manufactures of, XX. 862.

# MOT-MOU

Motella, genus of fishes, XII 270 MOTHE-LE-VAYER (François de la), XV.

Mother-of-pearl, XV 348; XVII 356—optical properties of, XVI, 540, 617—micrometer, VI, 346; XIV 759

Moths, IX 210-processionary, 213owl, 215-gamma, ib -gooseberry, 216 —clothes, 217—in furs, X 350—their insensibility to pain, III 177—their mode of entering bee-hives, IV. 575 their injuries to bee-hives, 585struction of, XXI 549

Motion, XV 666, VIII 321—vibratory, I 919—laws of, VIII. 326 et seq, XIV. 402, 403-change of, VIII 331-composition of, 333-reduction of motions, 340 — accelerated and retarded, 344; XIV 385-Aristotle on, III 543-of the surface of a fluid, XIV 386-of a rigid solid, 387—of a point, 384—resolution and composition of, 385—link-motion. 401; XX. 586—parallel, 591; XIV 402—of air, XVIII. 58, 59—of rivers and canals, XIX 182-forces acting on the motions of a ship, XX 158 et seq, 180—Zeno's arguments against, XXI 769. See Dynamics, Mechanics, Statics

- of the human body, III 40-voluntary, pioper to animals, 170—of fishes, XII 218—through the agency of muscles, XVII. 670—nerves of, 171, 172—in the leaves of plants, V 108
MOTRIL, town in Spain, XV 666.

Motschoulsky (Victor de), his works on insects, IX. 24

Motte (Henri de la), executed for tieasonable correspondence, V 504. Mottoes, in heraldry, XI 338.

MOTTRAM-IN-LONGDENDALE, In Chester, XV. 666

Motya, taken by Dionysius, VI. 283. Mourer (Thomas), XV. 666—his work on msects, IX. 2.

Moufflon of Sardinia, XIX. 634

formation ascubed to worms, 217.

Moulding, of glass, X 678—of specula,
XXI 185—in ship-building, XX. 184.

MOULDINGS, in architecture, XV 666, III. 489, 511—Greek, 467, 489; XX 732—Roman, ib; III. 476, 489—Italian, 477—in plastering, V. 743—in joinery, XII. 807, 808—to diaw Grecian, XX 732—of mediæval architecture, 734.

Moule, in Guadaloupe, XV 666. Moulin (Du), on Feudal law, IX. 528—his work against Milton, XV. 27. - LILLE, XV. 666.

Moulineau (M), roof constructed by, XIX. 388

MOULINS, town in France, XV. 667 MOULMEIN, in Hindustan, XV. 667—teakwood of, XXI. 276

Moulting, in annulose animals, IX. 57-in birds, 496. Moult's filter, IX 582.

Mound, in embanking, VIII. 644 MOUNT EVEREST, one of the Himalayas,

XV. 667; XVI 141. Mountain, party at the French Revolution, X 71 et seq

Mountain-barometer, IV. 465

MOUNTAINS, XV 667—attraction of, I. 834—snow line on, II. 624—afford proofs of beneficent design and adaptation to the wants of man, 669-their influence on climate, 671-barometrical measurements of, 462—cold of, VI 772; VII.
100—heat of the sun's rays on, VI 781
clectrical phenomena of, VIII. 588—
distribution of, XVII. 592; in Scotland, XIX. 793—height of, in different quarters of the world, XVII. 642—elevation of the German, X. 588.

of the moon, II. 213 Mounting of telescopes, XXI. 143, 144.

#### MOU-MUI

MOUNTMELLICK, Irish town, XV 667; XVIII. 729, 730 MOUNTRATH, Irish town, XV. 667. MOUNT'S BAY, in Cornwall, XV. 667. MOUNTSORREL, in Leicestershire, XV. 667. Mouonio, river in Lapland, XIII. 234. Mouravieff (General), XIX. 511. Mourgue (J. A), on mortality, XV. 607,

Mourne Mountains, VIII. 122. MOURNING, XV. 667 MOURZUK, XV. 668; IX. 528 Mouse, XIV 181—means of destroying mice, XXI 548.

Mousseline-de-laines, VIII 315. Moustache, IV 529 MOUT, or Moot, in Turkey, XV. 668 Mouth, human, III 47—in insects, IX. 31—annelides, XI 293—aiachnides, III 373-diseases of, in domestic animals, XXI, 564

Moutiers, in Sardinia, method of making

salt at, XIX. 587. Mouron (Jean), musician, XV. 668. Moutiay (Captain), V. 494

Mouzé (M), on subterranean fortification, IX. 816. MOVEMENT in music, XV, 668

Mowee, one of the Sandwich islands, XV. 668-Cook's discovery of, VII. 340. Mowing of corn-crops, IL 313. Moxon (Joseph), his work on joinery,

XII 804. on type-founding, XXI 402. Moxos, South American tribe, IX. 349

Moy, Irish river, fisheries of, IX. 624, 625 Moyes (Dr Henry), blind mathematician, Mozabites, African race, II 566.

MOZAMBIQUE, XV. 668; II. 228—current, IV. 176—channel, XV. 670—weights and measures, XXI 812

MOZART (J. C. W Gottheb), XV 670.
MOZDOK, in Russia, XV 673
Mozng, process in woollen manufacture,
XXI 923.

MOZUFFURNUGGUR, in Hindustan, XV 673. MSTISLAVL, Russian town, XV. 673. Mu, Egyptian deity, VIII. 437.

Muclage, II. 880-its nutritive qualities, VIII. 20

Muckersy (Rev. J), savings bank established by, XIX 656.

Mucous membrane, II. 835-papillæ of. 836-its connection with the skin, 838 Mucus, its properties as an aliment, VIII

Mudar fibre, XXI 782.

Mud baths, XV. 39.

volcanoes See Volcano. Mud-fish, XII. 316. Mud-tortoise, XIX. 17.

Mudge (Thomas), XV. 673-his invention of the lever escapement, VII 32-on

the fusee of watches, 28.

(WILLIAM), XV 673the measurement of the English arc of meridian, I. 775, 837; IX. 551-employed on the ordnance survey, XXI.

Mudie (Robert), on the elevated haunts of the ptarmigan, XX 226. Muffle-furnaces, X 356.

MUFTI, XV 678.

Muggleton (Ludowick), XV. 673-Muggletonians, ib.

Muggy, bird, XVI. 756. Mugil, genus of fishes, XII. 291-fossil,

Mughldæ, family of fishes, XII. 291. Mughlodei, family of fossil fishes, XII.

Mugiloides, genus of fishes, XII. 291. MUHALICE, town in Turkey, XV, 674. Mühlenbach, in Transylvania, XV 674. Mühlehausen, town in Prussia, XV. 674. Muir (Thomas), convicted of sedition, V. 550.

- (Messrs), their Bayaman beer, V. 836.

Murhead (J. P), his work on Watt's Mechanical Inventions, I. 866, n. 3, 870; XXI. 773, n.-his Life of Watt, ib.

#### MUJ-MUL

Mujehbé, mound of, at Babylon, IV. 342,

MULA, town in Spain, XV. 674. Mulatto, XIV. 719

Mulberry, V. 206; XVII. 764; XX. 288, 291, 292-culture of, XI. 717-in China, 588 — Granada, X. 794 — Russia, XIX. 520-paper made from the bark of the tree, XII. 694-in Lombardy, XIII 653, 654-France, X. 254, 255 shoots used as fodder, XVI. 142—only natural food of the silkworm, XX. 291 -strength of the wood, 757.

- order of plants, V. 206. MULCASTER (Richard), XV. 674.

Mulder (M), on agricultural chemistry, II 376, 377—his analysis of tea, XXI on the components of grape-82. n. juice, 889.

Mule-jenny, VII 442, 445; XX 510 Mules, in France, X 248—in Bolivia, IV. 827—Egypt, VIII 432—their barrenness, III. 175-strength, XIV. 417 ——— (spinning), XX 511—self-acting mules, VII. 445, XIV 251

Muley Hamet, king of Fez, XVIII. 383. - Moloch, XVIII. 384

Mulgrave (Lord), on the temperature of the ocean, VI. 777.

MULHEIM-AM-RHEIN, in Prussia, XV. 674 MULHEIM-AM-RUHR, in Prussia, XV 674 MULHOUSE, or Mulhausen, in France, XV.

Mulio, genus of insects, IX. 233.

MULL ISLAND, XV 674
Muller (C L.), his work on insects, IX

11. (Dr Max), XVII 529, 536, 537 (F. Paludan), Danish poet, XIX.

695 (G. FRIEDRICE), XV. 675

(JOHANN), or Regiomontanus, XV. 675. See Regiomontanus (JOHANN), Swiss historian, XV 675.

(J. F. WILHELM), engraver, XV 676

(J. GOTTHARD VON), engraver, XV. 676

(Johannes), on the rhizopoda, XXI. 1007.

- (KARL OTTFRIED), XV 676; XVII. on the plays of Epicharmus, IX. on Europides, 379—on the Herachdæ, XI. 318-his history of the Doric race, VIII. 109-on the origin of the Etruscans, IX. 356, 357, n. 1-on the Etruscan language, 360—on the Pelasgi, XVII 370—on philology, 533.
—— (M), of Bolbec, his photographic process, XVII. 549.

(Mr), on roofs, XIX. 382 on fishes, XII. 249 et seq., 328-

their classification, 226 on theology, XXI. 200.

(Othon Frederik), naturalist, XV. 677—on animalcules, III. 193, 194—on hydrachnæ, 388-on a species of vibrio, 200-his work on insects, IX. 6. (Prof.), on the locomotive faculty,

XIV. 568—on the field of vision, 573. — (Prof. Johann), on the erectle ves-sels, II 800, 801—on nervous matter, on the biam, 820, 821-on the structure of the glands, II 768.

(WILHELM), poet, XV. 677—his poetry, XVIII 119. (WILLIAM JOHN), English painter,

XV 677. Muller's glass, mineral, XV. 69. Mullet, fish, XII 290—as food, IX. 764. in heraldry, XI. 326, 331, Mullicite, mineral, XV. 101. Mullidæ, family of fishes, XII. 279. MULLINGAR, XV. 677; XXI 839. Mulling's quantity battery, XXI. 615-his

intensity battery, 615. Mullion, in architecture, III. 511 Mullus, genus of fishes, XVI 279. Mulsant (E), his work on insects, IX. 21. Multan, in the Punjab, XVIII. 690, 691-

language of, XIII 20% Multifernan Abbey, Westmeath, XXI. 841

## MUL-MUR

Multiple, in geometry, X. 517. Multiplication, in algebra, II 491, 495-in

arithmetic, III. 585-of vulgar fractions, 598—of decimals, 601, 602, 603—by Napier's rods, XV. 777.

ultipliers of electricity, VIII. 616-Cavallo on, VI 346

Multitubular horizontal steam-boilers, XX. Mummius (Lucius), Roman consul, Co-

rinth taken by, VII. 368

MUMMY, XV. 678—Egyptian mummies,
VIII 444—of the Guanches, VI. 163 See Embalming

wheat, V. 164. Mumps, disease, XXI 564 Mun (Mr), on political economy, XVIII 214, 216

Muna, pilgrimage to, XIV 379 MUNCHHAUSEN (H. K Friedrich von), XV

on animalcules, III 204 Munck (Jens), voyage of, XVIII. 169. Munda, battle of, XIX. 827. MUNDAY (Anthony), dramatist, XV 678. MUNDEN, town in Hanover, XV 678

– (Joseph Saunders), comedian, XV MUNDI, in Hindustan, XV 678.

MUNDINGOES, XV. 578 See Manding. MUNDOTE, in Hindustan, XV. 678 Mundrucu, South American tribe, IX, 348 Mundus, VII. 312

MUNEEPOOR, in Hindustan, XV. 678. Mungo trade, XXL 918

Munich, XV, 678, IV. 519—Academy of Sciences at, II 67—royal library at, XIII. 419-Count Rumford's improvements in, XXI. 230-university, 492

MUNICIPAL CORPORATION, MUNICIPALITY, XV. 680; XVII 289, 293—rights, VIII. 781. See Borough.

at Buxar, VI 25-fort of Truncomalie occupied by, XXI 350.

—— (Sir Thomas), on India, XI 514 n., 525 et seg.—on Canara, VI 160, 161 Munsa, one of the Shetland Islands, XX. 113

MUNSTER, Irish province, XV. 686—united presbytery of, XII. 532

- town and government in Pru XV. 687; XXI 844—university of, XVIII. 673—taken possession of by the Anabaptists, II 742.

— (Count), on fossils, XVII 100 et seq.
— (Sebastian), XV. 688—on dialling, VII. 775—his Hebrew Bible, XIX.

MUNSTERBERG, town in Prussia, XV. 688. Munt, Egyptian deity, VIII. 437. Munt-hotp, Egyptian king, VIII 455. Muntins, in joinery, V. 751.

Muntjaks, in zoology, XIV 209. Muntz (J. H), on encaustic painting, VIII 654.

 metal, XX. 174 MUNTZER OF MUNZER (Thomas), anabaptist, XV. 688; II. 742, XIII 729, 781,

732. Munychia, a port of Athens, IV. 171. Muohwa oil, XVI. 496 Murad Bey, VIII 488.

Muræna, genus of fishes, XII. 231—M. Helena, 230.

Murænesox, genus of fishes, XII. 232 Murænidæ, family of fishes, XII 231. Murænoblenna, genus of fishes, XII. 282. Murænopsis, genus of fishes, XII. 283. MURAL CIRCLE, XV. 688, IV. 153. Murano, near Venice, glass-works of, XXI.

MURAT (Joachim), XV. 688; V. 615; XII 653; X. 187 et seg., 160, XX. 261, 262, 264.

MURATORI (L. Antonio), XV. 689. Murchison (Sir Roderick Impey), his classification of Devonian rocks, XV. 199on the rocks of Russia, 205, 215; XIX. 517, 518—on gold in Russia, XV. 233 on the rocks of Germany, X. 584-on

#### MUR-MUS

the fossils called conodonts, XVII. 115 -on the rocks of Scotland, XIX. 793 and n.

Murchisonia, fossil mollusks, XVII. 109. 111.

Murchisonite, mineral, XV 70. MURCIA, Spanish province, XV. 690; XX.

493-chmate of, 488

— Spanish city, XV 691.

Murder, XI. 604; XIV. 429, XV. 567—its
punishment in China, VI. 566. See Infanticide

Murdoch (Mr), the inventor of gas-lighting, X. 410.

- (Rev. Patrick), on the conical development, X. 493.

(William), his steam-carriage, I. 881—his steam-engine valves, XX. 582. Mundoch's boring apparatus, V. 44 MURE (Sir William), Scottish poet, XV.

(Colonel), on Herodotus, XI 356-Homer, 600—Taygetus, XIII. 147—lake Copais, VII. 345

MURET (Marc Antoine), grammarian, XV. 691; XVII 523.

—— (M), on the population of the Pay de Vaud, XV 602—on births in Switzer-

land, XVIII. 348, 349. town in France, XV 692; X. 405. Murex, genus of mollusks, XV. 387—purple dye from, XX. 906; XXI 406.

Murghab, antiquities at, XVII. 432 Muriacite, mineral, XV. 96

Muratic acid gas, poisonous qualities of, XIV. 435; XVIII. 135. See Hydro-chloric Acid.

Muriazit, mineral, XV 96 Muricidæ, family of mollusks, XV. 387fossil XVII 109.

Muridæ, family of rodents, XVII 632. Murillo (B. Estevan), XV 692, III 712; XVII. 75-price paid for one of his pictures, 86.

Munom, town in Russia, XV. 694 Muros, town in Spain, XV. 694 MURPHY (Arthur), dramatist, XV. 691.

- (JAMES CAVANAH), architect, XV.

(ROBERT), mathematician, XV. 694.

Murrain, in cattle, II. 264—renders their fiesh poisonous, XIV. 439. MURRAY (Dr Alexander), XV. 694; XIII.

(Andrew), his work on insects, IX. on a species of malapterurus, XII. 261

(Dr John), chemist, XV. 695—his advocacy of Werner's views, XII. 684his opposition to Leslic's views on the radiation of heat, XL 264.

- (Joни), publisher, XV. 695. (Sir John), V 618. (Honourable Captain Erskine), his

expedition to Tanganon, V. 48, n. (LINDLEY), XV. 695.

· (Mr), British minister in Persia, XVII. 442

(Mr), of Leeds, his borng machine, V. 43. regent of Scotland, XIX. 780 et seg.,

(Sir Robert), XV 695. - (WILLIAM), Earl of Mansfield, XV. on the law concerning carriers. VI 274.

Australian river, XV. 696, IV. 293, 296, 281.

Murray's slide-valve, in steam-engines, XX 581. MURREE, in Hindustan, XV. 697.

Murrumbidgee, Australian river, XV. 697; IV. 255.

MURVIEDRO, town in Spain, XV. 697. Murzuk, II 223, 224.

Mus, in zoology, XIV. 180. Musa (Ibn Nosseyr), XV. 697. the ancient name of Mocha, III.

## MUS-MUS

Musæus, grammanan, XV. 698. Musca, genus of insects, IX 249. Muscardine, in zoology, XIV. 180-hybernation of, III 180

disease in silk-worms, XVII 697 Muscat, XV. 698; III. 859—Imam or Imaum of, 360—weights and measures, XXI 812

Muscatel raisins, XVIII 799 Muschelkalk, XV. 206—fossil fishes of, XII. 348—in Germany, X 584. Muschenbræck. See Musschenbroek. Muschman on magnetism, XIV. 42 Musci, nat order of plants, V 216. See Mosses.

Muscicapa, genus of birds, XVI 749 Muscides, family of insects, IX 247. Muscipeta, genus of birds, XVI. 749. Muscles, II 821, III 37—Galen's knowledge of, II 753-contractility of, 822; XVII 652, 670, 671—general remarks on, III, 39-composition of, IX 758electricity of, XVII 672-of brutes, III 91-of the elephant's trunk, 101-not apparent in animalcules, 195 - their great power in ants, 262-of fishes, XII. 218, IX 763-of mollusks, XV. 326, 332 et seq -reptiles, XIX. 14; serpents, 43-muscular tissue of animals, III 171 juice of, its chemical composition, VI. 523-muscular sense, XIV. 569, XVII. 677-diseases of, in the domestic animals, XXI, 557.

Muscovado sugar, XX. 795 Muscovite, mineral, XV. 77. Musculus (Wolfgang), XV 699 Museium, in ancient Athens, IV 169 Museo Borbonico, at Naples, XV. 781. Muses, XV. 699. MUSEUM, XV 699-museums in Italy, XII.

661—of the Capitol, XIX, 369.

— British. See British

— of university of Edinburgh, VIII.

399--Professor Jameson's exertions in forming, XII 685—collection of skulls in, XVII. 563. - National Industrial, Edinburgh,

VIII. 399; XXL 824-Dr G. Wilson curator of, 874.

Museums (trade), XXI. 323, 324—circulat-

ing, 324.

Mushed, Persian town, XIV 546. Mushet (Mr), on charcoal, VI. 421 (Mr), on cash payments, XV. 424 and n 6—on par of exchange, IX. 432 Mushet's furnace, X 356.

Mushroom anchor, III. 118.

—— order of plants, V. 217.

Mushrooms, V. 167, 142—yellow dye from,
VIII. 299—culture of, XI. 736—poisonous kinds of, XIV. 439—in Lapland, XIII 242.

Mushtahids, in Persia, XVII. 426. Music, XV 700 — in Athens, IV. 211 and n. 1—Austria, 318 — China, VI. 580— Egypt, VIII. 448, 448—Etrusenn, IX. 860—Hindu, XI 477—Java, XII. 706— Denmark, XIX. 696—Vienna, XXI 584 —principles on which it is founded, I
728—academies of, II 68—air in, 430—
Aretino's improvements in, III 522 beating time in, IV 529—taste for, in Brazil, V. 298—Cavallo on the temperament of musical intervals, VI 346characters used in, 419-composition in, VII. 226—design, 758—discord, VIII 44—harmonics and harmony, XI. 230—intonation, 436—melody, XIV. 485 pleasure derived from, 564, a. 4—symphony, XX. 898—temperament of the musical scale, XXI 148—thorough bass, 237—tonahty, 303.

Musical glasses, X 675; XI 280

instruments, XV. 708, 740—principles of, II. 107, 109—manufacture of, at Myrecourt, XV. 268. - sounds, II. 107—distinction between

them and other sounds, 108. Musicians, blind, IV, 781. Musignano (Prince of), his catalogue of the cyprinidæ, XII 257.

MUSK, XV 743.

## MUS-MYH

Java, XII 704 -- of India, XI. 454-Nepaul, XVI. 143-Tibet, XXI 247.

Musk ducks, XVI 817.
—— ox, XIV. 215, XVII 633
—— rat, XIV. 183—its fur, X. 348 Musketry, sound of, II 107 Muskets, XI. 96; XX. 211 - Enfield rified, XI 101-boring of, V. 44. Muskingum, river in Ohio, XVI. 489.

Muslems, in Syria, XX. 907. MUSLIN, XV 743-folding of, VI. 92-

manufacture of, in India, VII. 437; IV. 650; XI 458-first attempts to manufacture it in Britam, VII 449-origin of the name, XV 666-embroidery of XIV. 285-sewed muslins, X 650, of Antrim, III 286-manufacture of, at Mulhouse, XV 674, in France, X. 253

Musmon, in zoology, XIV 212 Musonius (C Rufus), XV 743. Musophaga, genus of birds, XVI 783. Musquash. See Musk Rat

MUSSCHENBROEK (Peter Van), XV. 743on dew, VIII 766, 767—on the Leyden phial, 526; I. 737—on magnetic force, XIV. 4-on meteorolites, 633-his pyrometer, XVIII 702 - his experiments on the strength of woods, XX.

Mussel, common, XV. 348, 345; IX 765—fresh-water, XV. 349—river, ib—pearl, 343, 349.

MUSSELBURGH, XV 744 MUSSET (L C Alfred de), XV 744 MUSSOUREE, in Hindustan, XV. 744. MUSSULMAN, XV. 745, 300-his character

in India, XI 463.
MUSTAPHA, I, II, III, IV, Turkish sultans, XV 745, XXI 369, 370, 373, 376.

Barractar, XXI 872, 373

MUSTARD, XV. 745—culture of, IL 336;

XI 744—plant of Scripture, V. 199 adulterations of, IX. 770.

Mustela, genus of mammalia, XIV 156, 157

—teeth of, XVI 479.

Mustelldæ, dentation of, XVI 461.

Mustellas, genus of fishes, XII 324.

Mut, Egyptian goddess, VIII. 436.

Mute, tube of insects, IX. 168. Mutilation, crime of, XIV. 428. See Castration.

Mutilla, genus of insects, IX. 194. MUTINA, XV 745, 296—battle of, XIX 328. MUTINY, XV. 745—in the British fleet at the Nore in 1797, V. 560; VIII. 252 of the Indian Sepoys in 1857, XVI. 301, measures for suppressing, 312.
Mutrus (Cains), XV 745, XVIII. 366;

- Scaevola, XV. 745 Muttahir, III. 363. Mutton, IX. 762. MUTTRA, in Hindustan, XV. 745. Mutual insurance societies, XII 408 Mutule, in Doric architecture, III 511. Muyscas, Mexican race, IL 683. Muziano (Girolomo), painter, XV. 745. Mya, genus of mollusks, XV. 350—fossils, XVII. 108.

Myacidæ, family of mollusks, XV 350. Myacites, fossil mollusks, XVII. 108. Myalina, fossil mollusks, XVII. 106. Mycale, battle of, IV. 200. Mycehum of mushrooms, V. 147.

MYCENÆ, O1 Mycene, Grecian city, XV. 746-architectural remains at, III. 440

-sculptured lions at, XIX 853 Mycetes, genus of mammalia, XIV. 142. Mycetobia, genus of insects, IX. 228. Mycetophaga, tribe of insects, IX. 142 Mycetophagus, genus of insects, IX 142. Mycetophila, genus of insects, IX 229. MYCONE, island, XV. 746. Mycteria, genus of birds, XVI. 800. Mycterus, genus of insects, IX. 133. Mydas, genus of insects, IX. 232. Mydasu, family of insects, IX. 232

Mydaus, genus of mammaha, XIV. 158. Myelin, mineral, XV. 84. Mygale, genus of arachnides, III. 377. genus of mammalia, XIV. 151-

tecth of, XVI. 451. deer, XIV. 205; XVII. 632 — of MYHERE, in Hindustan, XV. 746.

# MYL-MYT

Mylabris, genus of insects, IX. 135. MYLE, ancient town in Sicily, XV 746 MYLASSA or Mylasa, in Asia Minor, XV. 746 Mylesinus, genus of fishes, XII. 247. Myletes, genus of fishes, XII. 246. Myleus, genus of fishes, XII 247. Myliobates, genus of fishes, XII 328, 320, 326—fossil, 341, XVII. 119—teeth and jaws of, XVI 422, 423, 424.

Myhobatidæ, family of fishes, XII. 328 -fossil, XVII. 119

Mylius on pseudonymous books, IV. 712 MYLNE (Robert), alchitect, XV. 746plan of Blackfriars Bridge, III 409-his centre for it, VI 382. Mylodon, fossil sloth, XVII 173, 639. MYMUNSING, in Hindustan, XV. 746.

Myniops, genus of insects, IX. 139 MYNPOOREE, in Hindustan, XV 747. Myochama, genus of mollusks, XV 350 Myoconcha, fossil mollusks, XVII. 108. Myodites, family of insects, IX. 134. Myology, III. 37-comparative, 91-of the domestic animals, XXI. 557. See Mus-

cles Myopa, genus of insects, IX 245 Myophoria, genus of mollusks, XV. 349fossil, XVII 106.

Myoporaceæ, nat order of plants, V 202 Myopotamus, genus of mammaha, XIV.

Myopsidæ, family of mollusks, XV. 400. Myopteris, genus of mammalia, XIV 149 Myosen, Norwegian lake, XVI. 320. Myothera, genus of buds, XVI 753. Myoxis, genus of mammalia, XIV. 180. Myremill, system of ungation at, II 294 Myriacanthus, genus of fossil fishes, XII

MYRIAPODA, XV. 747—fossil, XVII. 103. Myricaceæ, nat order of plants, V. 207. Myrina, genus of insects, IX 208 Myripristis, genus of fishes, XII 279-

fossil, 343. Myristicaceæ, nat, order of plants, V. 204 Myrmecia, genus of arachnides, III. 383. Myrmecobius, marsupial animal, dentition of, XVI 448.

Myrmecophaga, genus of mammalia, XIV. 191. See Ant-eater. Myrmecophila, genus of insects, IX 158.

Myrmelion, genus of insects, IX. 178 See Ant-lion. Myrmelionides, family of insects, IX. 178 Myrmica, genus of insects, IX 194 See

Ant Myrobalan, order of plants, V. 192, MYROBALANS, XV. 750

Myron, Greek statuary, XV. 750; XIX. 854

MYRRH, XV. 750; V. 190-order of plants, ib. Myrsılus, king of Lydia, VL 169 Myrsmaceæ, nat. order of plants, V 199. Myrtaceæ, nat. order of plants, V. 192. Myrtle, order of plants, V. 190 Myrtle-wax, V. 207; XXI. 779. Myrto, XX. 377.

Mysia, in Asia Minor, XV. 751-coins of, XVI. 874.

Mysone, in India, XV. 751-conquered by the British, XI 502.

Mysorine, mineral, XV 103 MYSTERIES, XV. 752-Eleusinian, VIII

629-of free-masonry, XIV, 337-sacred dramas, VIII. 143—apostolic meaning of the word Mystery, I 470-error of attempting to explain those of the Christian system, 517, 518. Mysticism, XV. 755.

Mystics, I. 327.

Mystriophis, genus of fishes, XV. 233.

Mystriosaurus, fossil reptiles, XVII. 152.

MYTENS (Daniel), painter, XV. 759.

MYTHOLOGY, XV. 759—Egyptian, VIII. 435—Icelandic or Runic, 388—Bryant on, V 705; VII. 711 et seq.—of Crete, -Strabo on, ib .- Heyné on, XI. 366 -illustrations of, from coins and medals, XVI. 351 - its relation to philology, XVII. 527—comparative, 537—pagan, in reference to a future state, I 459— Russian, XIX. 546. See Deluge, Egyp-

## MYT-NAN

MYTILENE, XV. 768 - aqueduct at, III.

Mythdæ, family of mollusks, XV. 348—fossil, XVII. 106 Mytılus, genus of mollusks, XV. 348, 347

embryo of M. edulis, 355-fossil, XVII. Myus, in Carra, XV. 768.

Myxine, genus of fishes, XII 227, 228. Myxinidæ, family of fishes, XII. 228. Myxodes, genus of fishes, XII. 309. Myxospores, V 147. Myzine, genus of insects, IX 195. MZENSK, town in Russia, XV 768.

# $\mathbf{N}$

N, letter of the alphabet, XV. 769-in abbreviations, II. 19. NAAS, Irish town, XV. 769; XIII. 88. Nabis, Spartan tyrant, XV. 769. Nabloos, town in Palestine, XV. 769; XVII. 183.

NABONASSAR, XV. 769, IV. 382-era of, VI. 671

Naccarı (F L.), on birds, XVI 731. Nachet (M), his object-glasses, XIV 779, 780—his microscopes, 783, 784 NACHITSHEVAN, in Russia, XV. 769, 770. Nacrite, mineral, XV, 79. Nadır, IV 1.

SHAII, XV. 770; IV. 639; XVIL. 440; XI 480.

Nævius (Cneius), Roman poet, XV. 770 Nagasaki, Japanese town, XV. 770, XIL

Nagode, or Nagound, Sepoy insurrection at, XVI 311

Nagpore, in Hindustan, XV. 770-wai with the rajah of, XI 507. Nagyagite, mineral, XV. 118. NAGY, XV 771.

NAGY-BANYA, in Hungary, XV. 771. NAGY-BECSKEREE, in Hungary, XV 771.

NAGY-ENYED, in Transylvania, XV 771. NAGY-KAROLY, in Hungary, XV 771. NAGY-Koros, in Hungary, XV 771. NAGY-SZEBEN, XV. 771 See Hermannstadt.

NAGY-VARAD, XV. 771 See Grosswaideın

Naiadaceæ, nat. order of plants, V. 214 Naiads, XV. 771, XIX. 180 NAIGEON (Jacques Andro), XV. 771.
NAILS, XV 771—horse-shoe, or stubs, gun-barrels made from, XI. 96—num-

ber used at Christ's crucifixion, VII. 519 of the human body, II 835; XVII.

667—fashion of wearing them long, IX. 488.

Naıl-trade of Birmingham, VIII 729. Naın, in Labrador, XIII. 141. Nairn, XV. 771.
Nairnshire, XV. 772—agricultural sta-

tistics, XIX. 796, 797, 798-population,

Nairne (Mr), on electricity, VIII. 589-liis claims to the invention of the differential thermometer, XIII. 845-on pneumatics, XVIII 39.

Nairs, XI. 467; XIV. 104, 105. Nais, genus of annelides, XI. 302. Naishapur, in Persia, XVII. 422. Naja, genus of serpents, XIX. 64. Nama, sect of the, V. 267. Namaqua Land, XV. 772. Names of hounds, XI. 770. NAMUR, in Belgium, XV. 772-sieges of,

VII. 65 Nana Sahib, rajah, XVI. 305-his atro-

cities at Cawnpore, 1b, 306. Nanak, first teacher of the Sikhs, XVIII.

NANCOWRY, island, XV. 773 NANCY, town in France, XV. 778; XIV 697—population, X. 277. Nandou, bird, XVL 796. Nandus, genus of fishes, XII. 277. Nangasaki, XV. 773. See Nagasaki. Nangie, battle of, X. 167.

## NAN-NAP

NANI, or NANNI (Giovanni), artist, XV.

Nankeen-yellow, dyeing of, VIII. 300.
——cotton cloth, XV. 774

NANKING, in China, XV. 778—large bells
in, IV. 629—treaty of, in 1842, VI 597 NANTES, XV. 774—educt of, X. 33, 34; revocation of, XXL 276—leeches found near, XL 306—population, X. 277.

NANTUCKET, American Island, XV 775fishenes of, V. 480

NANTWICH, town in Cheshure, XV. 775-salt at, XIX. 582

Naos, in architecture, III 511. NAPARIANG, XV. 775; XIII. 691.

Naphtha, in chemistry, VI. 473, 506—in mineralogy XV. 128—of Baku, IV 381—of the Caucasus, VI 341—lamps for burning, XIII 172-coal-naptha, X. 433-from peat, XVII 359-white and black, in Persia, 422-springs of, 602

Naphthaline, VI. 504. Napier (Sir Charles James), XV. 775 his defeat of the Ameers of Scinde, V. 669, XIV. 471-his proceedings in Scinde, XI. 509—his capture of Emaum Ghur, VIII 643—his entry into Hyderabad, XII. 59

 (Sir Charles), admiral, his conquest of Acre, V. 668—his command in the Baltic, XIX. 502

(David), his improvements in steam-navigation, XX. 639.

- (John), baron of Merchiston, XV 776 - his invention of logarithms, I 563; III. 801; XIII. 552, 553 - his depth and originality of mind, I. 563his unrivalled ment, 564—his talents as a geometrician, ib -brought decimal notation to its utmost simplicity, 703on burning mirrors, VI 5-Napierian logarithms, II 534-his Rods or Bones. XV 777-his analogies, XXI 345, 346 (Lord), on the fire of St Elmo,

VIII 588 - (Macvey), XV. 778-Sir J Mackintosh's letters to, respecting his Dissertation on Ethical Philosophy, I 294 (M1), his printing machine, XVIII.

562 (Robert and Sons of Glasgow), on the cohesive strength of iron, XX. 174, 175, 779.

(Robert), XIII. 553.

(Sir William), on the British army, III. 662, 668—on Sir J. Moore's retreat to Corunna, V. 605, n.—on the character of Sir J. Moore, XV. 528—his account of the battle of Albuera, V. 609, 610on Sir W Drummond's conduct regarding the Spanish regency, VIII. 196-on the lines of Torres Vedras, IX. 806.

— (Wm. John, Lord), chief commissioner to China, VI 596
NAPLES, XV. 778, XX. 255—academies of

science at, II. 63-Academy of Heiculaneum, 70-acquired by Alphonso, V. 621—extensive poisonings at, with aqua tofana, III. 329—aimy, 655—end of Murat's government, V 615—parliamentary discussion in 1821 relative to, 630-invaded by Charles VIII. X. 29war with France in 1798, 110, its state at that time, XVI 135-appended to Spain, XIL 651-its condition under the Spanish government, XIV. 332-insurrection of 1820, XIL 655-political events of 1848, 657-libraries, XIII 415 monarchy, XV. 414—mortality, 624—savings-bank at, XX. 249—trade, ib university, 255; XXL 492—soap, XX 867-Virgil studies there, XXI 593weights and measures, 812, 805, 806. See Italy.

- Bay of, XX. 240. NAPOLEON I, XV. 782; X. 80, 96, 99 et seq -honours conferred on Volta by, L 965—his road over the Simplon, II. 624, n-his army and artillery, IIL 639, 689, 690-on conscription, 642 and n. 2; number of men he raised by, VII. 297, NARO, town of Sicily, XV. 798. n—his Italian campaigns, X. 99, 118; Narration, historical, XI. 548.

## NAP—NAR

IV. 304; V 558-works at Cherbourge 305-expedition to Egypt, 564; VIII 488, 489, X. 109-on the battle of the Nile. VIII. 489-on the site of Alexandria, 420, n. 2-invasion of Syria, V. 568; VIII. 489; X. 112-return from Egypt, V 568, X 115—letters to Geo. III, V. 569, 599, X 116, 135—passage of the Alps, 118; V. 574—appointed first consul, 591; X. 116—irritated by the English journals, V. 592, 593; X. 127-his designs against Malta, V. 592: X. 127-plans for the aggrandisement of his family, 126-conversation with Lord Whitworth, V 592; X 127 -Lord Whitworth's account of his behaviour at the Tulleries, V. 594: X. 127-his threatened invasions of England, V. 596, X. 121, 128, 136; XVII. 742-his policy in regard to religion, X. 125, n., 267-his abdication in 1814, return from Elba, V 618; X. 171; XXI 828-battle of Waterloo, V. 620; X. 172 (see Waterloo)—his character, 134-his second abdication, 173-surrender to Captain Maitland, ib .- sent to St Helena, 174-his death, 184-his remains conveyed to France, 215-his interview with the Emperor Alexander on the Niemen, II 468-Canova's bust of. VL 194-on field fortification, IX. 806-at Weimar, X. 698-his code, 132, XIII 272 - crowns himself with the iron crown of Lombardy, XII. 536-at the Kremlin, XV. 656-on the impolicy of bringing back Louis XVL from Varennes, X 61 - his policy towards the Jews, XII. 782-his partiality to Ossian's poems, XVII 7-his improvements of Paris, 279-his tomb in Paris, 282-his treatment of Pope Pius VII treatment of the Poles, XVIII. 153police under, 188, 191-post-office under, 421-his treatment of Prussia, and war with, 656, 657—policy in Spain, XX. 472—his treatment of M de Stael, 526 her unfavourable account of him, 527; his act of mediation for Switzerland, 886 - manufacture of beet-sugar en couraged by, 798—his connection with Talleyrand, XXI 13—his Italian cam-paigns, 705—his line of operations at Jena and Numburg, 706-his tactics in war, 703 et seg See Chronole Table, VI. 691 et seg, Wellington. Napoleon II, X. 239, n. See Chronological

III., Emperor of the French, X. 238, 239—his affair at Strasburg, 212 sent to United States, ib.—return from 214-his expedition to Boulogne and imprisonment at Ham, 216; XI. 197escape from Ham, X. 224-president of the republic, 238 — Emperor of the French, ib — visit to England, ib — French army under, III. 640 - on artillery, 684, 700, 702; XI. 137-ne papers suspended by, XVI 200-public works in Paris executed by, XVII. 280 -his operations in Italy in 1859, as commander-in-chief of the French and Sardinian armies, XIX, 643 et seq.

- com. XV. 441 Napoh-di-Romania, XV. 830. Nar, river, XVI. 289 NARANJOS, islands, XV. 797. NARBO MARTIUS, XV 797. NARBONNE, town in France, XV. 797. NARBOROUGH (Sir John), XV. 797; XX. 227.

Narcine, genus of fishes, XIL 327. NARCISSUS, XV. 797.

- flower, XI 752. Narcodes, genus of fossil fishes, XVII 117 Narcopterus, genus of fossil fishes, XII.

Narcotic poisons, XIV. 432; XVIII. 129; XIX. 611-treatment of sufferers from, XVIII. 184.

Narcotico-acrid poisons, XVIII. 129. Narcotism, XIV. 436. NARDO, town of Naples, XV. 798.

# NAR-NAT

Narrow, various meanings of, VIII. 11. NARSES, XV 798; VIL 806, XIL 641; XIII. 28, 30

- king of Persia, XVII. 435 Naruszewicz (A Stanislaus), Polish historian, XV. 799; XVIII 159. NARVA, in Russia, XV. 799-battle of,

Narvaez, XX, 482, 484,

XXX 478

- (Pamphilo de), his expedition to Mexico, XIV. 704

Narwhal, XIV 130, 229, 230-skulls and tusks of, XVI 444.

Narwhalus, genus of mammaha, XIV. 229. Nasal-bone, III 22—cavities, 30, 42 muscles, 39

NASEBY, XV. 799-battle of, V. 407; VII. 511

Naseus, genus of fishes, XII 304, 212fossil, 344.

NASH (John), architect, XV. 799—on iron bridges, XII 579 - (RICHARD), XV. 799-his statue at

Bath, IV. 498. (THOMAS), XV. 799—his story regarding the Earl of Surrey, XI 780—

on English hexameters, 363 Nash-mill cast-iron bridge, XII 588 Nashua, town in the United States, XV

800 Nashville, town in Tennessee, XV 800;

XXL 156. NASMITH (David), XV. 800

Massarra (Alexander), painter, XV. 801

— (James), on the surface of the Moon, IV. 89—of Saturn, 92

— (James), his steam-hammer, XI. 201; XII 563—his patent for purifying

iron, 554—his pile-engine, 604. (Lieut.), on the siege of Silistria, XXX. 501

- (Mr), his telescopes, XXI, 128. (PATRICK), painter, XV 801 Naso, town in Sicily, XV 801.

Nassau (Duchy of), XV. 801, X. 589, 591, 593-weights and measures, XXI

(Maurice of), Prince of Orange See Maurice. (William of), Prince of Orange,

XI. 563 et seq, 571 Nassick, town in Hindustan, XV. 802

Nassır-Eddin Al-Tussi, X. 503. Nasua, genus of mammalia, XIV 155-dentition of, XVI 462.

NATAL, XV. 802, II. 228; XIII. 82-Kafirs of, 37

- town in Brazil, XV 806 Natches, American tribe, IL 681. NATCHEZ, in Mississippi, XV 806 Nathan (Isaac), his Concordance, IV. 695. Natica, genus of mollusks, XV. 384-N melanostoma, ib.-fossil, XVII, 110. Naticidæ, family of mollusks, XV. 384.

Naticopsis, fossil mollusks, XVII. 110. National character, difficulty of estimating, IV.210-diversity of national tastes,

Assembly of France, X. 50. debt. See Debt, National. defences, XXI. 700.

EDUCATION, XV 806—in Austria, IV. 318—Prussia, XVIII 672—Russia, XIX. 530-Spain, XX 491. See Educa

Gallery, London, XIII. 674. government, seat of, in the United

States, XXI. 482 - Guard of France, X. 272.

period of the history of the United States, XXI 436

Nations, XI 537-the proper subject of history, ib.

- law of, XV. 829. See Law of Nations—in universities, XXI 446 et seq. Nativity, commemoration of the, XII. 757. NATOLIA, or Anatolia, XV. 829, II. 758. Natrix, genus of serpents, XIX. 58. Natrolite, mineral, XV. 75. Natron, XV. 98—in Africa, II. 213. tron lakes in Egypt, VIII. 429. Natter-jack, reptile, XIX. 80. Naturæ Curiosi, academy of, II 62.

## NAT-NAV

NATURAL HISTORY, XV 829-Bacon's views of, I 574, 575-defence of the study against the charge of cruelty, III 177, 178-interest of the study, XIV. 121; IX. 26—useful to physicians, XIV. 463—Pluny's work on, XVIII. 10 et seq.—Smellie's works on, XX. 337. See Ammal Kingdom, Botany, Mineralogy, &c, and the articles enumerated in vol. III.

laws, XIII. 254

order of plants, V 180 - риплозорну, XV. 829—its connection with mathematics, I. 805; and the mechanical arts, 807. See 4th, 5th, and 6th Dissertations, vol. L; Mechanics, Hydrodynamics, Optics, Astronomy, Magnetism, Electricity

theology. See Theology, God.
NATURALIZATION, XV 829; II. 581—in Belgium, IV 615-in what respect different from denization, VII 738.

NATURE, XV. 829—the word often used by philosophers as synonymous with God. I. 279

- law of, XIII 253. Nature-printing, XVIII 555.

Nauclerus, genus of fishes, XII 298-of buds, XVI, 744

Naucoris, genus of insects, IX. 168 Nauciates, genus of fishes, XII. 297

NAUDÉ (Gabriel), XV 829-on the classification of books, IV. 715, 716; XIII 374, 378—on the use of bibliographical works, 374-on classical books, IV 709 on the Admirable Crichton, VIL 489,

Nauen, town in Prussia, XV. 830 Naulas, genus of fossil fishes, XVII, 117. NAUMACHIA, XV 830.

Naumannite, mineral, XV 117 Naumburg, town of Prussia, XV 830— library at, XIII. 421.

NAUNTON (Sir Robert), XV. 830 NAUPACTUS, city of Ætolia, XV. 830; XIII, 339

NAUPLIA, town of Greece, XV, 830 Nautical Almanack See Almanack Nautihdidæ, fossil mollusks, XVII. 112.

Nautilus, genus of mollusks, XV. 390 ct seq.—N Pompilius, 391—pearly, 394, Owen on the, 357, 391—fossil, XVII. 112

Nauvoo, in Illinois, XV 830, 591 Naval Architectural School, VIII 83. - College at Portsmouth, IL 71; VIII. 83

- knights of Windsor, XVL 118. (Royal), benevolent society, XVI. 118.

schools, XVI. 118, 119.

tactics, XXI. 719—signals, XX. 24, see Signals (Naval)—early origin of naval terms, 125 See Navy. NAVAN, Irish town, XV. 831, XIV. 376,

378 NAVARINO, in the Morea, XV. 831—battle of, XI. 30; V. 651; X. 194

Navarra, in Spain, XV 881; XX. 493-Moorish kingdom of Navarre, 462, 464 -conquered by Ferdinand, 466

NAVARRETTE (D. Fernandez), Spanish missionary, XV. 832-on China, VI. 562, 568.

- (Juan Fernandez), deaf and dumb painter, XV. 832

- (MARTIN F. DE), Spanish historian, XV 832.

Navicular disease in hoises, XXI 561. Navier (M), French engineer, I 876-his researches, 1b.

NAVIGATION, XVI. 1-improvement in, 109-use of the barometer in, IV. 457currents affecting (see Currents)-expeditions methods employed in, for determining the ship's place, 340-United States, XXI. 426-action of the wind on ships, XVIII 65-application of steam to, I. 869—effects of the intro-duction of steam, XX 20—combination of steam with sails, 21—effect of the Crusades on, VII 588—first Navigation Act, XX. 121. See Latitude, Longitude,

## NAV-NEC

Resistance of Fluids, Navigation (Inland), Steam Navigation.

NAVIGATION (INLAND), XVI 53-modes of rendering small rivers navigable, XIX. 219—in Bengal, IV. 651—in America, 213—in Bengai, IV. 691—in America, 11. 675—Canada, VI. 134, 152—China, 589—the Elbe, VIII. 580—France, X. 243—Ganges, 400; IV. 651—Tigris, 362 —Tyne, XVI 166—New York, 214, 220 -proposed navigation across the American isthmus, II. 711-effect of wave transmission in canals, L 889. See Canals, Dredging, Brindley — LAWS, XVI 88, 2; VII 189, 145;

V 636, 671; VIII 737.

- Schools, in Belgium, IV 622. NAVIGATOR'S ISLANDS, in the Pacific Ocean, XVI. 88, XVIII 277.

NAVI, XVI. 89—suggestions for improving the British, V. 519—passion for enlarging it to excess, VII 145-proposal to lay up ships in ordinary on dry land, VIII 77-docks and dockyards, 74, 78—commissioners of, 85, 86—influence of colonies on, VIL 144-manufacture of biscuits for, IV. 378-neglect of, in the early part of fifteenth century, XX. 122-Lord St Vincent's exposure of abuses in, XII 748-mutany, an 1797, V. 350; VIII. 252-disposition of the British navy in 1813, XX. 135-table of ships in 1859, 138—Austrian, IV 317
—Brazilian, V. 297—Damsh, VII 749—
Egyptian, VIII. 515—Chinese, VI 583
—of Emope, IX. 388—French, X. 272— Greek, XL 20, 31—Norwegian, XVI 329—Dutch, XI. 585—Portuguese, XVIII. 396-Prussian, 672-Russian, XIX. 534 -Scotch, under James IV., 764-Sardiman, 638-navies of different kingdoms, XX. 138-Two Sicilies, 249, 253-Spain, 492-qualities of coal fitted for, 652-screw steamers in the royal navy of Great Britam, 670 — Swedish, 866—of the United States, XXI 430—Turkish, 382. See Dry Rot, Shipbuilding, Timber, Steam-vessels

- BAY, XVI 121. NAXOS, OF NAXIA, XVI 121 NAYLOR (James), fanatic, XVI 122 - (Mr), his model farm, XV. 518 NAZARETH, XVI. 122; XVII. 182, X. 374; XII. 758, 759.

NAZARITE, or Nazarene, XVI 122.

Neæra, genus of mollusks, XV 350—fossil, XVII. 108.

NEAGH (Lough), in Ireland, XVI 122; III 284; XII 505. NEAL (Daniel), XVI. 123.

Nealces, Greek painter, XVI. 123. Neale. See Smith (Edmund) NEANDER, German theologian, XVI. 123on miracles, XV. 264—on the dates of St Paul's Epistles, XVII. 350.

Neap tides, XXI. 249.

NEAPOLIS, XVI. 124 See Naples.

NEARCHUS, XVI. 124; III. 752; X. 463; XIII 771.

NEATH, in Glamorgan, XVI 125; X 642. Neave (Sheffield), his evidence on bank-

ing, XV. 463.

NEBRASKA, in United States, XVI. 125, XIII. 42; XXI 419, 442. Nebria, genus of insects, IX. 98.

Nebris, genus of fishes, XII. 285.
NEBUCHADNEZZAR, XVI. 126, VII 646,
XIV. 421—his improvement of Babylon, IV. 341-his invasion of Egypt, VIII

Nebulæ, IV. 85, 86: I. 842-classification ib -resolvable and unresolvable, ib. progressive condensation and breaking up of, ib. — distance of, 843 — Lord Rosse's observations on, 863 — on the cornea of the eyes of animals, XXL 577.

Nebular theory, L 842, 843. Nebule, in heraldry, XI. 325.

Necessity, doctrine of, L 268—zealously maintained by Leibnitz, 128—opinions of Locke, 148 and n.; Collins, 148, 265; Baron de Grimm and M. Diderot, 150, 270; Hobbes, 268; Edwards, 148schemes of, connected with atheism in | Neguardo tree, XVII. 762.

## NEC-NEG

modern philosophy, 266-argument for, drawn from the divine prescience, 270 — considerations on, VIII. 417 See

Neck, vertebræ of the, III. 5, 74—muscles of, 38—wounds of the, XIV. 431— sprains of, in domestic animals, XXI

NECKAR, river, XVI. 126. NECKER (Jacques), French financier, XVI. 126, X. 38, 39, 49 et seq, 122, XX. 524 Necrobia, genus of insects, IX. 111. Necrodes, genus of insects, IX. 114 Necrophorus, genus of insects, IX. 113. Necropolis, in Egypt, VIII. 499, 511—in Glasgow, X. 656

Necrosis, XXL 557. Nectanebes I. and II, Egyptian kings, VIII 466

NECTAR, XVI 127; II. 664. Nectaries of flowers, V 125 Nectarine, culture of, XI. 709. Nectarmia, genus of birds, XVI 769. Necydalis, genus of insects, IX 145. Nedd, in Glamorganshire, XVI 125 Nedham (Marshmont), early newspaper writer, XVI 181

NEDJED, m Arabia, XVI 127; III. 341. Need (Mr), his improvements in cotton manufacture, VII. 148, 149.

NEEDHAM (John Tuberville), XVI 127on animalcules and mucor, III. 204. Needle (Astatic), XIV 90

(Dipping) See Dipping-needle (Magnetic), XIV. 2 et seq; XVII 617-variation or declination of, I 990, VII 692; XVII. 617-effect of lightning on, VIII. 600-effect of aurora on, IV. 248 — its form and construction XIV 78.

Needle-ore, XV 120 Needle-spar, XV. 92

Needles, XVI 127—touch-needles, m assaying, III 770—for net-making, XIX 89, 90—dry needle, in engraving, XX. 746

- THE (rocks), XVI 128. Needlestone, XV. 75 NEEFS (Peter), painter, XVI. 128. Neem oil, XVI. 496. NEEMUCH, in Hindustan, XVI. 128

NEER (Arnould), painter, XVI. 129
———— (EGLON HENDRICK VANDER), XVI. 129. NEFF (Felix), missionary, XVI. 129 Nefn, town in Wales, XVI 161.

NEGAPATAM, in India, XVI 129. Negation, in logic, XIII 593, 594. Negative electricity, VIII. 535, 537. Negatives, partial, XIII. 588 Negrais, island, XVI 129. Negretti and Zambra's thermometer, XXI.

NEGRO (Rio), South American river, XVI. 130; XVII. 777.

one of the tributaries of the Amazon, XVI 130, 716; V. 292; XVII 604

NEGROES, XVI. 129-of Africa, II. 221, 225 et seq.; classified according to their languages, 221—in America, 704, 708— Mexico, XIV. 718—Algiers, II 566— Brazil, V. 295—Colombia, VII 184— Jamaica, XII. 679-Morocco, XV. 595-United States, II. 707; their future fate in, 709—Nicaragua, XVI 245— superior to the American Indians, II 693-their skin, 834, 835-skull, III. 29 -facial angle of, 80-complexion, VII. 222, 223—love of dancing, 644—insurrec-tion of, in Hayti, XI. 255—languages, XIII. 219, 225-in ethnology, IX 351 -number of converts to Christianity among, XV 272; their probable motives, 274—unknown to Europeans till seen by the Crusaders, XX 320—negro variety of man, IL 775; XI 541

Negro-slavery, XX. 321. See Slavery and Slave-trade. NEGROPONT, town of Greece, XVI. 129:

NEGROS, island, XVI. 130.

# NEH-NEP

NEHEMIAH, XVI. 130, XII. 767-Book of, XVI. 131.

NEHRUNG (Curische), district in Prussia, XVI 131

- (Frische), district in Prussia, XVL 131 Neil (William), mathematician, IX. 671

NEILGHERRIES, or Nilgheries, in Hindustan, XVI. 131; XVII. 599—height of,

Neilgherry pepper, XVII 404 - nettle, XXI. 782. Neill (Col.), XVI. 308, 310

- (Dr Patrick), on the Siren, XIX. 85.

Neilson (J B), his hot-blast furnace, XII. 547, 539 (R), his portable farm railway, II.

NEILSTON, village in Renfrew, XVI 131. NEISSE, town in Prussia, XVI 131 Neit, or Neith, Egyptian deity, VIII 437. Neithea, fossil mollusks, XVII. 106 Neiva, town of New Granada, XVI 240. Nejun, town in Russia, XVI 132

NEKO, or Necho, Egyptian king, XVI. 132; XI 389; VIII 464—voyage of, X 461 Neleus, a custodier of Aristotle's works, III. 536.

NELLORE, in Hindustan, XVI 132.

NELSON (Horatio, Lord Viscount), XVI 132—battle of Cape St Vincent, V 560 132-battle of Cape St Vincent, -battle of Aboukir, 564, VIII 489; X. 109-attack on Copenhagen, V. 580; VII. 346, 742, X 120—battle of Trafal-gar, V 598; XXI 724, 725—his intimacy with Lady Hamilton, XI 201his passage through the straits of Messina, XX. 241—his conduct at Naples, -his eulogium on Admiral Trowbridge, XXI. 355.

- (ROBERT), XVI 139 town and province in New Zealand, XVI 234, 235

Nelumbiaceæ, nat. order of plants, V. 181. Nemacanthus, genus of fossil fishes, XII. 340.

Nemalite, mineral, XV 80. Nematocera, genus of insects, IX 127 Nematoidea, zoophytes, XXI. 977, 978, 980—eggs of, 981.

NEMAUSUS, city of Gallia Narbonensis, XVI. 140, 279 NEMEAN GAMES, XVI 140, X 397

Nemertes, zoophytes, XXI. 982 Nemerianus (M. A. Olympius), Latin poet, NEMESIS, XVI. 140

NEMESIUS, Greek philosopher, XVI 140. Nemichthys, genus of fishes, XII 296. Nemobrama, genus of fishes, XII 302 Nemognathus, genus of insects, IX. 136. Nemoptera, genus of insects, IX. 178. Nemopteryx, genus of fossil fishes, XII.

Nemosoma, genus of insects, IX. 142. Nemotelus, genus of insects, IX 237. Nemoura, genus of insects, IX. 180. Nemours (Duke de), X. 220; IV 607. town in Fiance, XVI. 140.

NENAGH, Irish town, XVI. 141. NEME, or Nen, river, XVI. 141, 297, XII. 48. NENNIUS, historian, XVI 141.

Nent Force Level, aqueduct, XV. 244. Neocomian rocks, XV. 209 Neoctese, mineral, XV. 102 Neologists, on the character of Christ,

XII. 762. Neophron, genus of birds, XVI. 740 NEOPHYTES, XVI 141.

NEO-PLATONISTS, XVI. 141; IL 475; XII 194—their mysticism, XV. 755—their pantheism, XVII. 232.

NEOPTOLEMUS, king of the Dolopians, XVI 141.

king of Epirus, IX. 277.
NEOTS (St), town in Huntingdonshire, XVI. 141.

Nepa, genus of insects, IX. 165. NEPAUL, or Nipsul, in Hindustan, XVI. 141-invaded by the British, XI. 506-Buddhists of, X. 724-height of mountains, XVII. 643.

## NEP—NER

Nepenthaceæ, nat order of plants, V 205 Nepenthes See Pitcher-plant
Nepheline, mineral, XV. 73—nepheline dolerate, 133.

Nephelis, genus of annelides, XI. 306 Nephercherês, Egyptian king, VIII 454. Nepheris, VI. 301—taken by the Romans, 302

Nephrite, mineral, XV 82; XII 669. Nephritis, among animals, XXI 570. Nephrotoma, genus of insects, IX. 227. Nephthe, Egyptian deity, XI 384. Nephthys, Egyptian deity, VIII 438. genus of annelides, XI 299.
Nepides, tribe of insects, IX. 164.

NEPOS (Cornelius), XVL 149

—— (JULIUS), emperor, XVI 149.

Nepotianus (F P), VIL 303.

NEPTUNE, god of the sea, XVI 149;

XIV 360—Isthman games in honour of, XII 632.

- planet, IV. 98—its existence indicated by Leverrier and Adams, ib ; I. 829, 830—discovery of, by M. Galle, IV 93; I. 830 — Professor Challis' search for, III 817; IV. 94, I. 830 and n 1—old observations of, as a fixed star, 831—principal inequality of, 832 -satellite of, IV 94, I 860

Neptuna, fossil mollusks, XVII 110. Nerbuddan, nver, XVI 150; XVII 647. Nereuds, XVI 150, 396—fossil, XVII.

Nereis, genus of annelides, XI 298. NEREUS, sea-god, XVI. 150, 396. NERI (Filippo de, XVI 150 Nermæa, fossil mollusks, XVII. 110. Neritidæ, fossil mollusks, XVII 111. Neritoma, fossil mollusks, XVII. 111. Nerntopsis, fossil mollusks, XVII 111.

NERJA, town in Spain, XVI. 150. NERO (Claudius Cæsar), emperor, XVI. 150; XX. 46—reign of, XIX. 387— Rome partly rebuilt by, 360—his ban-queting house, IV. 422—baths, 505 his golden house, XIX 360

(C. CLAUDIUS), XVI 150; XIX.

(CLAUDIUS DRUSUS), XVI 150. Roman family, XVI 150 Nerophinæ, sub-family of fishes, XII. 316 Nerophis, genus of fishes, XII. 316. NERTSHINSK, town in Siberia, XVI. 151meteorological observations at, XIV.

Nerva (Marcus Cocceius), Roman empeior, XVI. 151—reign of, XIX. 341

NERVES, XVI. 151-Aristotle and others on, II 750 et seq .- anatomical researches on, 764 - their structure, 806 - ganglions, 809, 811—plexuses, 812—terminations, 813—different uses, ib.—of the eye, III. 45; ear, 47; nose, 43; tongue, 49; larynx, 51—anatomy of the, 57—functions of the cerebro-spinal and sympathetic nerves, XVII 675-of and sympathetic nerves, Avii 676—018 the teeth, XVI. 418—nerve cells, XVII. 650—nerve tubes, 653—electrical phonomena, 671, 672—cutting of, XXI. 576 See Nervous System.

Nervous diseases, in animals, XXI. 574. substance, III 171

system, of man, XVII. 668 — functions of, 669, 672—anatomy of, III. 51-of brutes, 108-of the invertebrata, 185; arachmides, 374; crustacea, VII. 538; insects, IX 42, 55; annelides, XI 291, 204; fishes, XII. 218; mollusca, XV. 322, 345 et seq-zoophytes, XXI 973-variations of, in different animals, III. 176—animals more intelligent the greater its perfection, 178—not apparent in animalcules, 195—pathology of, XVII. 698, 700-pathological laws regulating diseases of, ib. et seqcongestive derangements of, 701-diastaltic or reflex derangements of, ibstructural derangements, ib.-toxic derangements, 702—Galvani's experiments on, I. 959—Sir C. Bell on, IV. 630— works on, II. 768. See Nerves, Brain, Spinal-Marrow.

tissue, IL 806.

# NER-NEV

NERVII, Belgic nation, XVI 151. NESS (Loch), XVI. 151; XII 438; XIX. 794—never freezes, VI 777
——river, salmon fisheries in, IX. 611

-difficulty of improving its navigation, XVI. 78.

Nestis, genus of fishes, XII 291. NESTON, GREAT, in Cheshire, XVI, 151. Nestor, Greek leader, character of, XVIII.

Nestonans, XVI. 152—in India, XI. 467. NESTORIUS, XVI 151.

Nests, of ants, III 264; of fishes, XII 259, 281, 305—of birds, XVI. 737 et seq.
—edible, 758; VI. 394, XII. 710.
NESVISH, town in Russia, XVI 152
NETCHER (Gaspar), painter, XVI 152

NETHERLANDS, XVI. 152; IX. 399 See Holland, Belgium

Nets, stake, IX 617, 609—bag, 617, 610-Commissioners of Fisheries in Iteland on, 627-drift, 635-trawl, 636-net and coble fishing, 617, 611. See Reticu-1ation

Nett weight III 595. Netting, XXL 780

Nettle, older of plants, V 206.

V. 206—sting of, 75—nettles in India, XVII. 628, of Nielgherry, XXI.

Nettleford's Bolt, XIII. 541. Nettuno, XVII 241.

NEU-BRANDENBURG, XVI. 152.

NEU-STRELITZ, XVI. 155

Neubold (Captain), on the Dead Sea, XVII. 188

NEUBURG, town in Bayaria, XVI, 152. NEUGHATEL, or Neufchâtel, XVI. 153; XX. 882—cretaceous 10cks of, XV 210 -asserts its independence of Prussia, XVIII 661.

- Lake of, XVI 154; XX. 889variation of its level, ib.

NEUDORF, town in Hungary, XVI. 154 NEUHAUS, town in Bohemia, XVI. 154 NEUHAUSEL, town in Hungary, XVI 154 NEUHOFF (Theodor, Baron von), XVI. 154.

NEUILLY-SUR-SEINE, town in France, XVI. 155-centre employed for the bridge of, VI. 378, 381

Neuman (M.), on propagation by roots, XI. 694.

Neumann (C. A.), on pseudonymous books, IV 712.

Neuman's burning mirror, VI 11 NEUMARKT, town in Prussia, XVI 155. NEUMUNSTER, town in Denmark, XVI. 155

Neuralgia, XVII 700. Neuralema, II 807, 810. Neuro-spinal disorders, XVII. 700. Neurolite, mineral, XV. 73. Neurology. See Nervous System. Neuroptera, order of msects, IX. 25, 174

Neurotomy, XXI. 576 NEUSATZ, town in Hungary, XVI. 155

NEUSIEDL, or Neusiedler-see (Lake), XVI 155; XII. 10.

NEUSOHL, town in Hungary, XVI. 155 NEUSS, town in Prussia, XVI. 155 NEUSTADT, town in Prussia, XVI 155 - town in Austria, XVI. 155

NEUSTADT-AN-DER-HAARDT, IN BAVATIA, XVI. 155.

NEUSTADT-AN-DER-ORLA, in Saxe-Weimar, XVI. 155.

NEUSTADIL-AN-DER-WAAG, in Hungary, XVI. 155.

NEUSTADT-EBERSWALDE, in Prussia, XVI.

Neuter, in grammar, X. 747.

among bees, IV. 570—ants, III

NEUTITSCHEIN, town in Austria, XVI. 156. NEUTRA, town in Hungary, XVI. 156 NEUTRALITY, XVI. 156; XIII. 288— armed neutrality of 1780, V. 494; VII.

NEUWIED, town in Prussia, XVI. 160. Neva, nver, XVI 160; XVII 487, 647; XIX. 516.

NEVADA STERRA, in Spain, XVI. 160. - in California, VI. 96.

#### NEV-NEW

Nevé, the snowy region of glaciers, X. 636. NEVERS, in France, XVI. 160 NEVIN, in Carnaryonshire, XVI. 161

phenomena on, VIII. 583

NEVYLE, or Nevile (Alexander), XVI. 161 NEW ALBANY, in Indiana, XVI. 161.

- Albion, II. 448

Aichangel, II. 707.

BEDFORD, in Massachusetts, XVI. 162; XIV 341

BRITAIN, Island, XVI. 162; V 672; TV. 264

BRUNSWICK, British colony in North America, XVI 162; II 707—weights and measures, XXL 812

BRUNSWICK, in New Jersey, XVL 164. Caledonia, IV. 266

College, Oxford, XVII. 35. England, XVI. 170—cotton manufacture in, VII. 459-newspaper press of, XVI 194—persecution of Quakers in, XVIII 719

FOREST, XVL 170: XL 203: XX

- Granada, XVI. 173 See Granada, New.

- Guinea See Papua

HAMPSHIRE, in United States, XVI. 173; XXI. 419, 431, 432, 433-wines of, 888

HAVEN, town in Connecticut, XVI. -Yale College at, VII. 295

Hebrides, islands, XI. 280, IV. 265. Holland. See Australia. IRELAND, island, XVI 175: IV 264.

JERSEY, American state, XVI. 175; XXI. 419—debt of, 428—wines, 888—newspapers of, XVI. 194—colonised, XXI. 433

Lanark. See Lanark, New. Leon, in Mexico, XIV. 728

London See London, New. Mexico, XIV 729

ORENEY, XVI 176

ORLEANS, XVI 176—British attempt on, in 1814, V 617.
Oxford sheep, II 346
Plymouth, town and province of

New Zealand, XVI 234.

Providence, island, IV. 365, 366 River, XI 359

SOUTH SHETLAND, XVI. 179.

South Wales, province of Australia, XVI 179, IV. 270—history of, ib—gold discovery in, 275—gold diggings, ib. 277-gold exported from, 278-topography and appearance of the country, -soil and climate, 279-productions, 280, 281—statistics of, 282, 284—currency, 285-carboniferous rocks of, XV. -as a penal colony, VII 139ry's exertions for the improvement of, XVII. 308—height of mountains in, 646—railway statistics, XVIII 787 railways and telegraphs in, XX. 896map of, IV. Plate.

York, American state, XVI 213;
XXI. 419—debt of, 428—wines, 888 settlers in, 433—cotton manufacture of, VII 459—life assurance in, XII 414 rate of interest in, 432-newspapers of, XVI. 194.

York, city, XVL 221-library at, XIII. 429; Astor library, 430—supply of water to, XII. 131, 141—reformatories for the young at, XVIII. 586—savings' banks in, XIX. 671.

- ZEALAND, XVI. 232; IV. 266 cannibalism in, VI. 174—Captain Cook's visit to, VII. 340—language, XIII. 202, 208—scheme for the colonisation of, VII. 150; XII 818—a botanical region, V. 229; XVII. 629—Kaurie or Cowdie pine of, V. 209-height of mountains in, XVII. 646—stationary state of the aborigines in civilisation, I. 451—deinornis, or fossil birds of, XVII. 634-volcanoes, 590.

- Zealand flax, V. 212, 229; XVIL

NEW-NEW

New Zealand spinach, XI. 742
Company, XII. 818, VII. 150; XVI. 238, 239.

New-Light Seceders, XVIII 500. NEWARK, town in New Jersey, XVI 161. NEWARK-UPON-TRENT, in Nottingham, XVI. 161—battle of, V. 405—Newark

Dyke bridge, XII 596 Newars, of Nepaul, XVI 144, 746 NEWBERN, town in North Carolina, XVI.

Newbold (Mr), his proposals for fire insurance, XII 417

NEWBURG, town in New York, XVI 165. NEWBURGH, town in Fifeshire, XVI 165 Newburn-upon-Tyne, battle of, V. 396 Newbury, in Berkshire, XVI 165; IV. 666—battle of, V 405

- Jack of, clothier, XXL 914 Winchcombe

Port, in Massachusetts, XVI 165. NEWCASTLE, in Limerick, XVI 165

(Duchess of). See Cavendish (Margaret).

- (Duke of), on horsemanship, XI 633

NEWCASTLE-EMLYN, in Caermarthen, XVI

NEWCASTLE-UNDER-LYNE, in Stafford, XVI 165.

NEWCASTLE-UPON-TYNE, XVI 165-method of working coal at, VII. 121-Pails first supplied with coal from, 116—brick-clay at, V 346—high-level bridge at, XII. 603, 604.

NEWCOME (William), archbishop, XVI. 170.

Newcomen's steam-engine, XX. 575, 636, I 770.

Newel, in architecture, III. 511 Newell's parautoptic lock, XIII 543. Newenham (Mr), on the Irish corn-laws VII 385—on the effect of the Irish

cottage system, 431. NEWENT, in Gloucester, XVL 170; X.

682. NEWFOUNDLAND, XVI 170-discovered by

the Norwegians, IL 698; by the Icelanders, XII 198; by Cabot, II 699—fisheries of, VIII 728, IX 647; XII 268-attempt to deprive the New Englanders of the fishery of, V. 482-fogs of, XIV. 654-trade with Labrador, XIII. 140-weights and measures, XXI 812.

dogs, XX. 220. Newgate, XIII 678—burnt in the Lord G Gordon riots, V. 492—condition of prisoners in, XVIII. 568, 569. - novelists, XIX. 283

Newhaven, village in Mid-Lothian, XVI 174; IX. 795.

n Sussex, XVI. 174. Newkirkite, mineral, XV 112

Newman (Edward), his works on insects, TX 21 - (Mr). on the worship of the Virgin

Mary, XIV. 327. Newman's blowpipe, IV. 793 Newmarket, XVI. 176—Heath, VI 115racing at, XL 641, 642, 686 et seq Newnham (Mr), V. 522

Newport, (George), his works on insects, IX. 21.

- in Kentucky, XIII 70. - in Rhode Island, XVI. 179; XIX.

in Monmouth, XVI. 178 - John Frost's riotous attack on, V. 667.

in Salop, XVI. 178. in Tipperary, XVI. 179. town in Isle of Wight, XVI 178

-savings-bank at, XIX. 664. in Pembroke, XVI. 179.

NEWPORT-PAGNELL, in Buckingham, XVI.

NEWBY, Irish town, XVI. 179; VIII. 122.

Newsletters, XVI. 180-French MS. newsletters, 198 NEWSPAPERS, XVI. 180 - numbers delivered in United Kingdom, XVIII. 414;

XIX. 810; in Scotland, ib—sent to foreign places, XVIII 414—postage of,

NEW-NEW

and postal arrangement for, British and foreign, 417—paper for, XVII. 259—of America, X. 289, n 3—Germany, 593—Glasgow, 653—Leeds, XIII. 316— London, 673—Edinburgh, VIII 403— Jamaica, XII 676—New York, XVI. 221, 229—New Zealand, 234, 235—Noiway, 331—New Mexico, XIV. 730—Roman Acta Diurna, II 117—in Philadelphia, XVII 510-Sandwich Islands. XVIII. 270, 273—Swift's Examiner, XX. 872-in Turkey, XXI 383-Examiner, commenced by James Wilson, 875. See Gazette.

Newton (Adam), VII. 585, n. 6.

(Sir Isaac), XVI. 205 — remarks on some queries of, I. 69—effects of his discoveries, 140-his contributions to metaphysics, ib; to optics, 661 et seq, 747, 588, IL 39; VI 644 et seq; XIII 451 et seq , XVI. 534, 579, 580, 581, 599, 601, 603, 606, 619, to astronomy, I 670, 676, 678; III 803—state of the sciences when he appeared, I. 634-his genius and sagacity, 799-pioblem of the quadrature of the cucle, 634-binomial theorem, ib -his discovery of fluxions, 635; IX. 671, 672-his controversy with Leibnitz, 636, VIII 354-his works on the new analysis, I 646—his tract on the quadrature of curves, 647—his book of Fluxions, ib discoveries contained in his Principia, 652; character of that work, ib, 139, X. 505-character of his Optics, II. 88, I 139-his optical works, 670, n-his discovery of gravitation, 670 et seq; II. 221; IV. 220-causes of the inegularities of the moon's motion, I. 676determined the mean quantity of retrogradation of the line of the moon's nodes, ib -on the precession of the equinoxes, 678-his philosophy has received continual improvements, all confirming its truth, 679-on the tides, ib, 680, 816, 817—on the orbits of comets, 681, VII. 167—on the nature of gravity, I. 684—compared with Leib-nitz, 687—his thermometer, 767; IV. 457—his theory of the moon, 779—his telescope, II 88; XVI. 538; XXI. 126, 127—his optical errors, II. 89—his theory of sound, 103—on wither, 188 his formula of the chords of multiple arcs, 555—his attempt to solve a pro-blem of Apollomus, III 302—on comets, IV. 78—on the gradation of atmospheric density, 464-his burning mirrors, VI. 11 - Dr Clarke's translation of his Optics, 757—on the coinage, VII. 79—on halos, 411—his theory of crystallisation, 546 - his obligations to Dr Barrow, VIII 354—Leibnitz's envious detraction of the laws of motion, 327, 342-his inverse problem of centripetal forces, 361-on acceleration of forces, 356—on electricity, 524—on equations, IX. 292, 294—on the earth's figure, I. 677; IX. 548—on projectiles, XI. 108-on hydrodynamics, XII. 71, 104, 105, 159-his theory of colours, XIII. 453-his correspondence with Locke, L 118, n. 3-on magnetism, XIV. 3-his reflecting microscope, 784his opinions on the nature of light, I. 896—on pneumatics, XVIII 55, 65, 67, 69, 70, 71—on the perfections and sovereignty of God, XIX. 222-on the resistance of fluids, 195-his demonstration of the 28th lemma of the first book of his Principia, XX. 522-on cohesion, 751-on the alternate attraction and repulsion of light by bodies, 752. See Newtonian Philosophy. (E.), typefounder, XXI. 403.

(GILBERT STEWART), artist, XVL

(JOHN), English divine, XVI. 211— his hymns, XII 189.

(THOMAS), bishop, XVI. 212. (Sir W.), his mode of transferring

collodion pictures to paper, XVII. 548. town in Cheshire, XVI. 212.

#### NEW-NIC

Newton's metal, IV. 735.

NEWTON-ABBOT, in Devonshire, XVI. 212. NEWTON-ARDS, in county Down, XVI. 212 NEWTON-IN-MAKERFIELD, in Lancashire, XVI. 212.

NEWTON-STEWART, in Wigtownshire, XVL 212; XXI. 863

NEWTON-UPON-AYR, XVI. 212, IV. 332. NEWTONIAN PHILOSOPHY, XVI. 210—slow reception of, I. 682-first publicly taught in Scotland, 683 n., 249 and n. 1-its progress in France, 683, 692, in England, 692, 693-Dr Clarke's mode of intioducing it at Cambridge, VL 757. See Astronomy, Attraction, Optics, Dynamics, Gravitation, Newton, &c.

NEWTOWN, in Montgomeryshire, XVL 212. NEWTOWN-BARRY, in Wexford, XVL 212 NEWTOWN-HAMILTON, in Armagh, XVI.

NEWTOWN-LIMAVADY, in Londonderry, XVI 212

NEWTOWN-STEWART, in Tyrone, XVL 213 Newts, XIX, 82

Newtyle Railway, VIII 257.

NEY (Michel), marshal, XVL 239; X. 137 et seq., 159, 160—at Waterloo, V. 619, 620—trial and execution of X. 176— Duke of Wellington blamed for his death, XXI 829.

NEYVA, town of New Granada, XVI 240

Nezib, battle of, X. 215. NGAMI, lake, XVI. 240; IL 215, X. 477

NGANHOEI, Chinese province, XVI. 241 NIAGARA, river, XVI 241-Falls of, VI 135; XVIL 605-Sir C Lyell on the recession of, VI. 135—suspension-bridge over, XII. 590—group of rocks, XV. 199 . XVI. 215.

NICZEA, in Bithynia, XVI. 241, 248. See Nice.

- town of Liguria, XVI. 242, 247. Nicaise of Malignes, IV. 779.

NICANDER, poet, XVI. 242. - (H), on mortality in Sweden, XV.

- (Kail August), Swedish poet, XIX.

700. NICARAGUA, republic of, XVI. 242-pro-

posed ship canal through, II. 711; XV 663; XVI 245 - lake of, XVI. 243, 246; II 711.

NICASTRO, town in Naples, XVI. 247 Niccolini (Giovanni), his iragedies, XVIII 112.

NICCOLO PISANO, OT DI PISA, XVI. 247. See Pisano.

NICE, XVI. 247-its perfumes, XVII. 408 or Nicæa, Council of, XVI. 248, VIII. 473; XIX. 353—time of celebrating Easter fixed by, VI. 80.

Niczpiostys I., emperor of Constantinople, XVI 249; VII. 313.

II. (Phocas), XVI. 249.

III. (BATONIATES), XVI. 249; VII.

816. (Callistus), XVI 249
Patriarch of Constantinople, XVI.

249.

Roman emperor, VII. 313. (Uranus), VII. 313.

Niceron (Pere), on Rabelais, XVIII. 740.

Nicetas of Syracuse, astronomei, III. 788. Niche, in architecture, III. 488, 511. Nicholaieff, Russian town, XIX. 587. NICHOLAS L, pope, XVI. 249.

- II., pope, XVI. 250.

- III., pope, XVI. 250. IV., pope, XVI. 250. - V., XVI. 250.

I, of Russia. See Nicolas I. Sicilian diver, VIII. 56. (St), island, XVI. 250.

Nicholls (Dr), on Bishop Sherlock, XX. 712.

NICHOLS (John), XVI 250 Nicholson (General), XVI. 804, 305,

AVIII. 694 - (Margaret), her attempt to assas-

sinate George III., V. 521. - (P), his work on carpentry, VI. 258 on the employment of iron in roofs,

#### NIC-NIE

266-on carpentry, XIL 805-his rule for calculating the strength of a beam, XX. 780

Nicholson (William), XVI 250; L 965-his aræometer, III 391-spinning condenser of electricity, VIII. 614—revolving doubler, 615-hydrometer, XIL 86 -on the colours of thick plates, XVI. 621-on the voltaic pile, XXI. 628.

(William), his printing machine XVIII 558

NICIAS, Athenian statesman, XVI 250, IV. 206—his expedition against Sylacuse, XX. 899

Greek painter, XVI. 251; XVII. 57.

Nickel, metal, XV. 60, 61, 66, 246, VI 492; XVII. 622—its combination with iron, VII 600-specific gravity, XII 88 -magnetism of, XIV 16, 26-mine of, near Inverary, III 526, XV. 246—in Chile, VI 548—copper nickel, XV 116 -white, ib.

of the, V 301.

Nicol (William), I. 913, n,-his prism, XIV

789; XVI. 649; I 913.

— (Prof.), on the geology of Scotland, XIX. 811, 790—hs geological map of, 792, n .- on geology of Rox-

buighshire, 453 Nicolai (C. Friedrich), XVI. 251 — on

spectral illusions, III 315, 317. Nicolaief, IV. 743 Sce Nikolaiev NICOLAITANS, GROSTIC Sect, XVI. 252.

NICOLAS (Sir N. Harris), antiquary, XVI 252-his edition of Nelson's Dispatches, 136 n, 139 n

- I. (PAVLOVICE), emperor of Russia, XVL 252 - his accession to the throne, XIX. 496—his treatment of the Poles, 498; and Circasians, ib -his policy, 1b—his opinions regarding Tur-key, 1b. 499—death, 507—Petersburg improved by, XVII. 487-his cabinet in the winter palace, 491—his designs on Turkey, XXL 375

- or Nicholas (St), town in Belgium, XVI. 252.

NICOLAUS (Damascenus), XVI 252; VII. 638

> (MYREPSUS), XVI. 252 (PRÆPOSITUS), XVI 252

NICOLE (Pierre), theologian, XVI 252 on the quadrature of the circle.

NICOLL (Robert), Scottish poet, XVI. 254. NICOLO (San), town in the island of Tinos, XVL 254.

Nicolson (William), archbishop, XVI 254—his character of Sir Thomas Craig, VIL 479, n 2.

NICOMACHUS, Greek painter, XVI. 254. NICOMEDES I, Bithynian king, XVI. 254. - II. (EPIPHANES), XVI 254; VI. 222.

- III., XVI 254. geometer, X. 501—conchold first proposed by, HL 143; X 544—on the

quadrature of the circle, XX. 521. ——— (Philopater), VI. 222. NICOMEDIA, XVI. 255, 254; XII 629.

Nicopolis, in Ancient Greece, XVI. 255 in Turkey, XVI. 255; VII 653. Nicosia, capital of Cyprus, XVI. 255—town in Sicily, XVI. 255.
Nicotiana Tabacum, flower of, V. 124, 201.

See Tobacco.

Nicotine, XIV. 488; XXI 293. Nictitating membrane, III. 98 Nidech, town of Asia Minor, XVL 264. Nidwalden, in Switzerland, XXI, 494. Niebelungen-lay, German poem, XI. 603

NIEBUER (B. George), historian, XVL 255; XI. 543, 549—on the origin of the Etruscans, IX. 356-on the ruins of Babylon, IV. 344—on the Agrarian laws, II. 246—his discoveries among the palimpsests at Verona, XVII. 213, 214—on the Pelasgi, 371—on Scaliger's scholarship, 523-his History of Rome, 525-Schmitz's edition of his

## NIE—NIM

Lectures on Ancient History, IV. 344on the passage of the Israelites through the Red Sea, XVIII. 819-on the Roman senate, XX. 44 on Seneca, 47on Suetonius as a historian, 788-on Tacıtus, XXI. 4

NIEBUHR (Carsten), traveller, XVI. 262on Arabia, III 352

NIEMCEWICZ (Julian Ursin), Polish poet, XVI 262; XVIII 159

NIEMEN, river, XVI 263; XVII. 647; XVIII 662, XIX 516 NIEMES, town of Bohemia, XVI 263

NIENBURG, town of Hanover, XVI. 268. Niepce (Isidore), photographist, I 923, n. 1. \_\_\_\_ (Necephore), his discoveries in photography, I. 922, XVI. 551; XVII

(de St Victor), his improvements in photography, XVII 546, on the use of nitrate of uranium in, 551-his recent discoveries in photography, 552.

Nieshin, town in Russia, XVI. 132. Nieuport, battle of, XI 572.

NIEUWENTYT (Bernard), Dutch philoso-pher, XVI 263—his opposition to the geometry of Newton, I 649; IX. 676. NIEUWLAND (Peter), XVI. 264.

Nièvre, in Fiance, XVI 264. NIGDEH, town in Asia Minor, XVI 264. NIGER, XVI 265; XVII 608, 647-course and termination of, IL 210, 214; X

477, XIII. 181-hypothesis of its connection with the Nile, X. 476; XVI 270-expeditions of discovery to, X. 477. See Park (Mungo).

- (C Pescennius), Roman general, XVI 267, XIX, 346

Niger-seed oil, XVI 495 Nightingale, XVI 756; XVII. 633-Swedish, XIII 236

- (Miss Florence), XIX. 506. Nightmare, or incubus, XVII 680 Nightshade (deadly), V 202-its effect on the pupil of the eye, III. 44; XVII 702--poisonous properties of, XIV. 438 XVIII. 130

- order of plants, V. 201. Nightsoil, as manure, II. 301, 408 Nignine, mineral, XV 110. NIGRITIA, or Soudan, XVI. 267; II. 228 Nuhau, island, XVIII 270. NIJAR-HUEBRO, town in Spain, XVI 267 NIJRI-NOVGORON, XVI 267, XIX 520, 521—fair of, IX. 469; XIX 542.

NIKOLAIEV, Russian town, XVL 268; IV

Nikolsburg, town in Moravia, XVI. 268 NILE, nver, XVL 268, 348; II 213, XVII 607, 647-supposed connection of its overflow with the plague, 748-crocodile of the, XIX. 23-names of, VIII. 424hieroglyphical character of, XI. 393its source, II. 55, 213; VIII 425-rise and mundations, 428, XVII. 600-observances connected with, VIII. 448—its water and deposits, 425—ascent of, 502—canal of the, II. 473—Bruce's journey to discover the source of, V 689 -worshipped by the Egyptians, I 457 -ferthlsing effect of its overflow, XII 621-tribes of people dwelling near, IX. 351—quantity of water conveyed to the sea by, XVII. 573—delta of, 586—slope and velocity of, 601-fertilising mud,

 battle of the, V. 564; VIII. 489, X. 109; XVI. 135.

Blue. See Bahr-el-Azrek. White. See Bahr-el-Abyad. Nilio, genus of insects, IX. 131. Nilometer, VIII 426, 448

608.

Nilsson (Prof), on the salmon of Scan-dinavia, XIL 241—on Swedish birds, XVL 731.

Nilus, Egyptian deity, VIII. 439; XI. 885, 898, Nimbus, rain cloud, XIV. 656.

NIMEGUEN, in Holland, XVI. 27L NIMES, town in France, XVL 272, 279. Nimrod, son of Cush, III. 778, 741, XX. 818. on horses, XL 647 et seg.-on riding. 674-on the terms used in deer-hunting.

## NIM-NIT

XII. 39—his description of a full-headed deer, 40.

Nimroud Birs, IV. 343-Nimroud, XVI. 273, 275.

Nimroz See Seistan. Nineven, XVI 272; XI. 542—history of, III 741-Layard on the buildings of, 499, 500, 501-Fergusson on the architecture of, 501, 502-taken by Cyaxares. XIV. 421—sculptured monuments of, XIX. 846—masonry of, XX. 710.

Ning-Po, XVI 277--opened to British commerce in 1842, VI 597—exports and imports, 591.

NINIAN, or St Ninian, XVI 278 NINIAN'S (St), village in Stirlingshire, XVI. 278.

NINOVE, town of Belgium, XVI, 278. Ninus, king of Assyria, III. 741, 778, XI.

542. NIOBE, XVI 278-statue of, III. 708.

Niobite, mineral, XV. 109 NIORT, town in France, XVI 278: XX 67. Niphon, or Nipon, island, XVI 278, XII. 688

- genus of fishes, XII 275. Nipisigit, river in New Brunswick, XVL

Nipissing (Lake), XVL 278. Nipples, III. 72

Nips, in coal beds, VII. 116

Nisæa, IV 208

NISAN, Hebiew month, XVI 279; II 40. Nishapoor, town in Persia, XVI 279 Nishni-Novgorod See Nijni-Novgorod. Nisi Prius, in law, XVI. 279

Nismes, or Nimes, town in France, XVL 279, X 404—Roman aqueduct at, III. 336—amphitheatre at, II. 731—per-fumes manufactured at, XVII. 408

Niso, fossil mollusks, XVII. 110 NISSA, or Nisch, town in Turkey, XVI. 280. Nisus, genus of birds, XVI. 743. Nitela, genus of insects, IX. 196.

NITH, river, XVI. 280, VIII. 239—valley of the, XIX. 790—close-time in, IX 613. NITHARD, French historian, XVI. 280. NITI, pass over the Himalayas, XVI 280. Nitidula, genus of insects, IX. 114 Nitidularise, family of insects, IX 114. Nitôkris, Egyptian queen, VIII. 455.

Nitrate of soda, as manure, II. 305, 413— in Peru, XVII. 472—of potash, II. 413 of silver, VI 499—chemical effects of the spectrum on paper washed with, XVI. 595 - its use in photography, XVII. 545 et seq.

- of Ulanium process in photography, XVII 551.

Nitiatine, mineral, XV. 98.

Nitre. See Saltpetre. Nitric acid, VI 463, VIII. 580; XV. 61, 64 sometimes found in the air, II 376; V. 95; VI. 465-discovery of its composition, 352; VIII. 595—its poisonous quality, XIV. 485—specific gravity of, XII. 89—in tobacco, XXI 293.

oxide, a poison, XIV. 435. Nitrocalcite, mineral, XV. 99.

Nitrogen, or azote, VI. 461-a component part of the atmosphere, IV. 180-its specific gravity, 181; XIL 89; VI. 488 ın plants, II. 375, 381, V. 94, 95-in different manures, II 412—quantity removed from the land by different grain crops, 417-alimentary principles containing it, VIII. 18—combined with oxygen, VI. 462-deutoxide of, ib. protoxide, ib.—illuminating power of coal-gas deteriorated by mixture with, X. 432-as an element in the crust of the globe, XVII 619.

Nitrogenous food, XIX, 610. Nitromagnesite, mineral, XV. 99. Nitrous acid, VI. 463-vapour of, poisonous, XIV. 435 -nitrous acid gas, its singular action on the spectrum, XVI. 597, I. 915—specific gravity of, XII. 89. oxide, XIV. 435—discovery of i properties, I. 967; IV. 566; VII. 668--discovery of its

its intoxicating quality, VIII. 197. Nitsch (F. A.), his account of Kant's views regarding free will, I. 196.

#### NIT-NOM

Nitzch, on the spirituality of God, XXI 190.

NIVELLES, town in Belgium, XVL 280normal school at. IV. 621.

NIVERNAIS, French province, XVI 280,

NIXDORF, town of Bohemia, XVL 280. Nızam, Alı, XI 490

NIZAM'S DOMINIONS, XVI. 280; XI 501 See Hyderabad.

fidelity to the British, in the sepoy revolt, XVI 311. Nizámí, Persian poet, XVII. 429.

Nizolius (Marius), his revolt against the authority of Aristotle, I 25.

NIZZA MONFERRATO, Sardinian town, XVI.

province, XIX. 640 Noad (Mr), on magnetic electricity, XXI 648.

NOAH, XVI 280; III. 267-his ark, 608 Bryant on, VII. 711—dispersion of his posterity, VIII 44, 45—his communications with God, I 466 See Deluge

Nobert (M), on microscopic lines, XIV. 801, 804, 805. Nobili, the associate of Melloni, I 955-on

heat, ib; XL 265-his thermo-multiplier, I. 955; XXI. 642—on the current of the frog, I 961—his improvement of the galvanometer, 976—on movements in electrolytic liquids, XXL 629 - on colours formed on metalic plates by voltaic electricity, 682—his experiments on thermo-electric circuits, 650 - his

thermo-electric pile, 652.

NOBILITY, XVI. 280 — Aristotle on, III. 567, n 3 — numbers of, in England, VIII. 768—of France, X. 46—Arabia, III. 850-abolition of a hereditary, in Norway, XVI 318—effect of the Crusades on, VII 532—Italian, XII 662—Prussian, XVIII 664—Roman, XIX 318—feudal nobility of Europe, in fif-teenth century, 761—Swedish, XX. 864 See Duke, Marquis, Earl, Viscount, Baron.

Noble (Mr), his definition of insamity, XIV, 526.

- (M. le), his use of the magnet in medical cases, XX. 414. —— coin, XVI 888.

Nobiega, a Jesuit, V. 281.

NOCERA DEI PAGANI, town of Naples, XVL

Noci, town of Naples, XVI. 282. Nock (Henry), his patent breech for guns,

Noctalio, genus of mammalia, XIV. 148. Noctiluca, zoophytes, XXI. 1000. Noctua, genus of birds, XVI. 746. genus of insects, IX. 215. Noctuelites, section of insects, IX. 214. Nocturna, family of insects. IX. 210. Nocturnal birds of prey, XVI. 745.

Noddies, buds, XVI 813. Nodes, XVL 282; IV 12-of the moon's orbit, 38, 37—of the planetary orbits, 57—motions of the, I. 812.

in botany, V. 78. Nodier (Charles), XVI 282—his works on insects, IX. 17—his novels, XIX. 289 Noel's attack on Pascal, IV 450.

NOGENT-LE-ROTROU, town in France, XVI. 282. Nogent-sur-Seine, centre for the bridge of,

VI. 377. NORMOUTIERS, island, XVI. 283.

Noizet (General), his system of fortifica-tion, IX. 821, 884.

NoLa, town of Naples, XVL 288—battle of, VL 297.

Nolanacee, nat order of plants, XVI. 201. Nolle prosequi, in law, XVI. 288. Nollekens (Joseph), XVI. 288—character of his sculpture, XIX. 867-Smith's

work on, XX. 348. Nollet (Jean Antoine), I. 734, n. 1-his

controversy with Franklin, V. 868-electricity, VIII. 527, 602. Nomada, genus of insects IX. 200. NOMBRE-DE-DIOS, town of Mexico, XVI.

284; XIV. 727.

#### NOM-NOR

Nomenclature of anatomy, IV 443-chemistry, VI 453 — chronological, in geology, XV 195 Nomes, divisions of Egypt, VIII. 421. Nomeus, genus of fishes, XII 298. Nomia, genus of insects, IX. 198 NOMINALISTS AND REALISTS, XVI. 284; I.

328 Nominative case, X 749. Nomophylaces of Athens, IV. 214. Nomothetes, of Athens, IV. 215. Nomsz (Jean), Dutch author, XVI 285. Non-conductors, in electricity, VIII. 540 Non-intrusion controversy, XVIII. 495; VI 405-Sir J. Gibson-Craig's share in. VII. 476.

Nonagesimal Degree, XVI. 285, IV 117.

Nonagon, XVI 285 Nonconformists, XVI 285 Sec Puritans, Baptists, Independents, Methodists, Presbyterians, Quakers.

Nones, XVI 286; VI 76 Nonius (Fernando and Pedro) See Nunez Nonjurors, XVI 286; VI. 713. Nonnus, Greek poet, XVI. 286. Nonparell type, XXI. 421, 422, 423.

Nontronite, mineral, XV. 90 Nooaheeva, Nouheva, or Nouka-hiva, one of the Marquesas islands, XVI. 287; XIV. 313.

Noor (Gerard), jurist, XVI 287. Noor-ed-Deen. See Noureddin. Noorka Sound, XVI 287—dispute between Britain and Spain about, V. 536.

Nopal Plant, V. 194. Nopaltzin, Mexican king, XIV. 699 Nonberg, or Nordberg (George), XVL 287 Norbertines, XVIII. 479

NORCIA, town in the Papal States, XVI. NORD, department of France, XVI 287

- Côtes Du, XVI 288; VII 426. Norden, town in Hanover, XVI. 288 - (Sir J.), on agriculture, IL 257. Nordenflycht (H. Charlotte), Swedish

poetess, XIX 698 NORDHAUSEN, town in Prussia, XVI 288. NORDHEIM, town in Hanover, XVI 288 NORDKOPING, or Norrhoping, in Sweden, XVI. 288; XX 862, 864.

NORDLINGEN, town of Bayaria, XVI. 288. Nordmann on zoophytes, XXI. 973 et seq Nore, XVI. 288-mutany of, V. 560; VIII

Irish river, XIII. 84, 87; XVIII

Norfolk Crag, fossils of, XV. 215. · (Duke of), his case of divorce, VIII. 70.

- (Duke of), XIX, 787, English county, XVI 288---population and value of property, VIII 754system of cropping, II 292—woollen trade of the town of, XXI 914.

—— ISLAND, XVI 291—pine of, III.

896; V. 209-as a penal settlement, XVIII. 578, XXI 30.

- m Virginia, XVI 291. Nona, hydraulic machine, XII. 69, 183. Noric Alps, II. 624.

Noricum, Roman province, XVI. 291. Noris (Henry), XVI. 292

Norite rock, XV. 135 Normal Schools. See Schools Norman architecture, III. 449 — painted glass associated with, X. 667—roofs, XIX. 390.

- conquest of England, VIII. 665its effects on the Anglo-Saxon nobility,

794 - (Robert), first observed the dip of the magnetic needle, VIII. 42; XIV. 2,

XVI 4. Norman-Gothic architecture, III 480. NORMANDY, XVI. 292; X. 277-invaded by Henry I, VIII 670-Pliocene rocks

in. XV. 215. Normans. See Danes, Norwegians Noiris (Dr Hill), his photographic process

XVII. 548. 7II. 548. -- (E), philologist, XVII. 584. -- (John), XVI. 292

(Sir John), XX. 182.

# NOR-NOR

NORRISTOWN, in Pennsylvania, XVI. 293. Norrland, division of Sweden, XX. 864, XT 354

Norroy king-of-arms, XI 320 Norse language, VII 750. Norte (Rio del). See Rio del Norte NORTH (Sir Dudley), XVI 294-on politi-

cal economy, XVIII. 217 (FRANCIS), Baron keeper of the Great Seal, XVI 294

(FREDERICK), earl of Guildford, XVI, 294—his administration, V. 477 et seq -resignation, 500-coalition between him and Mr Fox, 506; X. 852—secretary of state, V 506
——(Roger), XVI 294.

Briton, newspaper, V. 467, 468. CAPE, XVL 298; XIII 233

Pole, Parry's attempt to reach, XVII 307 — open water probably around, 583. See Polar Regions - SEA, or German Ocean, XVI. 298

North-east Passage, XVIII 163. NORTH-WEST PASSAGE, XVI. 300; XVIII 166 et seq-hst of modern north-west

voyages, 171, n.—Cook's voyages in search of, VII 340, Franklin's, X. 295, 298—ascertained to exist, but not navigated, by Sir R M'Clure, 474, 299voyages in search of, 473-Davis's voyages in search of, VII 666

TERRITORY, XVI. 316; XI 791. Company, X. 346.
NORTH-WESTERN PROVINCES OF BENGAL

XVI 301-statistics of, XI 524. NORTHALLERTON, XVI 295

NORTHAMPTON, XVI. 295—tables of montality, XV 641, XII 399—m Massachusetts, XVI. 296; XIV

341. NORTHAMPTONSHIRE, XVI 297 - population and value of property, VIII. 754. NORTHCOTE (James), painter, XVL 298-

character of his works, XVII. 80 Northern (Great) Railway, XVIII 794. 795-stations, 774-coal-waggons, 782-Jenkins' coal-burning locomotives on XX. 358.

- CIRCARS, XVI, 298; VI, 728. Northfleet, in Kent, proposed dockyaid at. VIII 78.

Northmen, VIII. 660, 661. Northmore (Mr), his plan of a universal character, VI 417.

Northom on the Belgian army, IV. 599
NORTHUMBERLAND, XVI 299—addition to
its area, VIII 719—population and
value of property, 754.

——— (Duke of), his exertions in improv-ing life-boats, XIII 446. See Dudley. Northwich, in Cheshire, XVI 816—saitmmes of, VL 528; XV. 246; XIX. 582, 585.

Norton (M1), on the various readings of the New Testament, IV. 698 - CHIPPING, XVI. 316; VI. 600.

Norvel's rope machine, XIX. 412. Norway, XVI 316; IX 402—belief in supernatural beings still prevailing in, I 464-its disjunction from Denmark V. 614. 615-union with Denmark and Sweden, VII 739-ceded by Denmark to Sweden, 743—glacies of, X 634— Jews in, XII 783—language, XIII. 211—libratics, 427—leprosy in, 341—silver mines of, XV 236-metallic produce of, 248-elevation of, 167-mortality, 607, 631—newspapers, XVI. 202—works on the birds of, 730—coins of, 389—proportion of msane, XIV. 536-snowlevel, XVII. 602-increase of population in, XVIII. 350-navy, XX. 138-wars with Sweden, 845 et seq .- annexed to Sweden, 860-weights and measures, XXI 819

Norwegian harrow, IL 278-herrings, IX.

Norwegians, their discovery of America, II. 698—invasions of France, X. 9 et seg.; of the Hebrides, XL 279; of England, VIII. 663; Scotland, XIX. 754 their early intercourse with Greenland, XI. 88-were the first settlers of Ice-

## NOR-NOV

land, XII. 197—Norse language, VII. 750—their naval enterprise, XX. 119. See Danes, Normans.

Norwich, XVI. 332—early newspapers of, 186—markets, 290—foreign weavers in, XXI. 780-woollen trade of, 914, 918.

- in Connecticut, XVI, 335

Norwood, town in Surrey, XVI 335.

(RICHARD), XVI 335—measurement of an arc of meridian by, I 618, IX. 548-on navigation, XVI 5

Nose, III 42-bone of the, 22-cavities, 42-muscles, 39-in brutes, 94-surgi-cal restoration and repair of, XX, 835; diseases of the, in cattle, XXI. 571. Nosean, mineral, XV. 74.

Noseman on birds, XVL 720. Nosology, vegetable, V. 170. Noss, one of the Shetland Islands, XX.

Nossi-BE, or Nos-Beh, island, XVI, 335. NOSTRADAMUS (Michel de), XVI 335. Nostrils, III. 42, 94

Notables (Assembly of), X. 41 et seq. Notacanthus, genus of fishes, XII 292 Notacanthidæ, or Notacanths, family of fishes, XII 292

Notæus, genus of fossil fishes, XII 347 Notagogus, genus of fossil fishes, XIL

NOTARY, XVI. 335—in Scotland, 336 NOTATION, XVI. 336—Arabic, an acquisi-tion from the East, I. 556—in algebia, II 489 - in arithmetic, III. 582 - of decimal fractions, 599—chemical, VL 451—trigonometrical, XXI 338. Notching, in carpentry, V. 746.

Notes, in music, XVI. 336 - See Bank Notes, Bill of Exchange. Nothosaurus, fossil reptiles, XVII, 143 Nothosomus, genus of fossil fishes, XII.

335. Nothus, genus of insects, IX. 133. Notidanidæ, family of fishes, XII. 324 Notidanus, genus of fossil fishes, XII.

341, XVII. 118. Notiophila, genus of insects, IX. 255. Noro, Sicilian city, XVI 336; XX. 255. Notodonta, genus of insects, IX. 214. Notonecta, genus of insects, IX. 166. Notonectides, family of insects, IX. 166. Notopoda, genus of crustacea, VII 541 Notopterus, genus of fishes, XII 250, 249. Notothenia, genus of fishes, XII 307. Nototherium, fossil mammal, XVII. 175,

Notoxus, genus of insects, IX. 134. Nott (General), V. 668—Ghizni dismantled by, X. 603

(Dr), on Barbour's Bruce, IV. 436; VIII 796-on the Earl of Surrey's translation of the Eneid, VIII. 119

NOTTINGHAM, XVI. 386-lace manufacture of, VII 451; XIII. 143-meteorological observations at, XIV. 688—rearing of silk-worms at, XX. 292

NOTTINGHAMSHIRE, XVI. 893; VIII. 754-

lace manufacture in, XIII. 145. Noue (La), on chivalry, VI. 624, 625—on romance, XIX. 264, 265, 266 Nouet (M.), on the dimensions of the great pyramid, III. 437.

Nouns, X. 746, 789-in Egyptian grammar, XI. 423, 427—inflection of, XIII. 192

NOUREDDIN, Noor-ed-Deen, or Nur-ed-Din, Moslem rulers of Syria, XVI. 841; XXI. 911

- (Mahmoud), XVI. 341-his invasion of Egypt, VIII. 480.

Nova Scotta, XVI. 342—b wonets of, IV.

469—war between Britain and France

concerning, V. 462-iron ores of, XII. 542—trade with Labrador, XIII. 140—weights and measures, XXI. 812. Novacula, genus of fishes, XII. 267. NOVALIS (F. L. von Hardenberg), XVI.

841. Novanglus, Letters of, XVI. 198. Novantæ, Caledonian tribe, VI. 74; XIX.

Novara, in Piedmont, XVL 842; XIX. 640.

## NOV-NUN

Nova Zembla, XVL 345, XIX. 552—degree of cold in, III. 737. NOVATIANUS and Novatians, XVI. 345; XTT, 368.

NOVEL, XVI 346; XIX. 253, 269-Goethe's, X.699—of Eugene Sue, XX 787—effects of novel reading, IX. 542—writers of Sweden, XIX. 701. See Romance. Novelda, town in Spain, XVI 346

NOVELLARA, town in Italy, XVI. 346. Novels of Justinian, VI. 746

NOVEMBER, XVI 346-Gardening Calendar for, XL 760

Noverre on the ballet, IV 398 Novgorod, or Novogolod, XVL 346; XIX. 471, 473, 520, 521

- city, XVI. 346-its former commercial importance, XI 214; XII. 817. Novgorod-Sieversk, XVI. 347.

Novi, town in Italy, XVI. 347-battle of, Novi-Bazar, town in Turkey, XVI. 347.

Novice, XVI. 347. Novitska, destroyed by the allied fleet in

1854, XIX. 507. Novo-Repondo, town in Africa, XVI.

947 Novo-Tscherkask, town in Russia, XVI.

Nowagure, a raj of India, XVI 347 Nowanuccur, town in India, XVI 347. Nowy-Gycin, town in Moravia, XVI, 156.

Nox, in mythology, XVI. 347. Nox (Sir William), XVI. 347

NOYON, town in France, XVI 347.
NUBLA, XVI. 347; II 224—temple of
Amada in, III. 441—mines of, VII 188 -gold from, XV 230. See Nubians - steam-vessel, performances of, XX 165

Nubians, II. 219; IX. 351-their lan-

guages, XIII. 227. Nuble, in Chile, VI. 547. Nuck (Mr), on the lacteals, II. 762 Nucleobranchiata, fossil mollusks, XVII

Nucleolites, fossil echinoidea, XVII. 100. Nucula, genus of mollusks, XV. 349-fossil, XVII. 106.

Nuda, family of mollusks, XV. 401. NUDDEA, in India, XVI. 349, 350. Nudibranchiata, order of mollusks, XV.

NUGEENAH, fown in India, XVI. 350.

Nuggets, IV. 276, 277.

Nuisance, in law, XVI 350; XIV. 427—
from smoke, XX. 352, 359—Nuisances Removal Act, XVIII 205; XIX. 603.

Num, Egyptian deity, VIII. 435. Numa Pompilius, XVI 350; XIX. 296. Numantia, XVI 350—taken by the Romans, XIX. 315; XX. 458.

Numbers, abstract, II 52—mystical properties of, III. 575—Chinese notion of virtue in odd numbers, VI. 571 - in grammar, X. 747, 789—golden number, III. 788—symbols of hieroglyphical numbers, XI. 402-phrenological faculty, XVII. 563-Pythagorean doctrine of, XVIII. 711.

—— Book of, XVI. 350; XVII. 400.

Numenius, genus of birds, XVI 802.

NUMERALS, XVI. 350—numeral characters,
VI 418—Roman, III. 672—Chinese, 573
—Greek, 575—denary or Arabic, 579;

I 556, IL 7.

Numeration, or Notation, in arithmetic, IIL 582—digital, II. 8.

NUMERIANUS (M Aurelius), Roman em peror, XVI. 350; XIX. 349.

Numida, genus of birds, XVI. 788.
Numidia, XVI. 350; II 566—Masinissa, king of, XIV. 834—Micipsa, king of, 741—horsemanship in, XI. 673—its sub-mission to Rome, XIX. 326—slavery, XX. 320. See Jugurtha, Juba.

NUMISMATICS, XVI. 351—as illustrations of history, III. 422. See Coins, Money. Nummulites, fossil shells, XVII. 93, 94 nummulitic limestones, 94; XXI. 1007. Nun, river of Morocco, XVI. 392.

or Non, promontory, XVI. 392; XV 594.

#### NUN-NYM

Nun, Nonn, or Nomi, Chinese river, XVI

NUNCIO, XVI. 392.

Nuncoreus, XI 389. Nundcomai, Hindu prince, V. 529, 534; XI. 494.

Nundidroog, Indian fortress, capture of, V. 541

NUNDINÆ, XVI 392 Nuneaton, town in Warwick, XVI. 393.

NUNEZ, or Nomus (Fernando), XVI. 393. – African river, XVI. 393. or Nonius (PEDRO), XVI. 393; III.

798; X. 504; XVI 393 NUNS, XVI. 392--authority of abbess over, II 13.

Nuoro, in Sardinia, XIX. 640 Nuremburg, town in Bavaria, XVI 393, IV. 518—library at, XIII 421—Diet at, 760—peace of, XVIII 824

Nuria, genus of fishes, XII 257. Nurpoor, town in India, XVI 394. Nurseries, culture of trees in, XVII 766public, in Paris, 283-nurseries for playactors, XXL 171

NURSIA, Sabine city, XVI 394. Nursing of children, XIV. 441 NURTINGEN, town of Wurtemberg, XVI 394.

Nusariyeh Mountains, XX. 902. - Synan sect, XX 908. Nushirvan, Persian king, XVII 435. Nusseer Khan, IV 640

NUSSEERABAD, in India, XVI 394—sepoy mutiny at, 309.

Nussiente, mineral, XV 106. Nut, screw, XIV. 397.

Nut-galls, or gall-nuts, VIII 280; X 382 -tannin and gallic acid from VIII 281.

Nut-hatches, birds, XVI. 768 Nutation, IV. 14; XVIII. 459—solar, IV. 15—of the earth's axis, 15—discovery of, III. 805-solar and lunar nutation, XVIII. 457.

Nutbrook Canal, VII. 754. Nutcrackers, birds, XVI. 765.

NUTMEG, XVI. 394—of Australia, IV. 261—of the Banda Islands, 410—tree, V. 204—value of the imports of, VIII order of plants, V. 204.

Nutpe, Egyptian goddess, XI. 382, n 9. Nutra, fur-skinned animal, X. 348, 351. NUTRITION, XVI. 395-anatomy of the organs of, III. 58-common to plants and animals, 170—perhaps the only in-dispensable function of animal life, 195 —of animalcules, ib —of bees, IV. 571 organs of, in plants, V. 75-their anatomy, 76, physiology, 94—fishes, XII 221—function of, XVII 656—diseases of, 668, 689. See Aliment, Food, Die-

tetics, Digestion.
Nurs, XVI. 395; V 138—trees bearing, XVII. 768-as an article of food, IX.

Nuttalite, mineral, XV. 72. Nuttall (Thomas), on American birds, XVL 733, 782, 786, 810.

Nux Vomica, XVI. 395; V. 200-poisonous properties of, XIV. 438; XVIII 128, 130, 132. See Strychnia, Strychnos. Nuyts (Peter), his discoveries in New Holland, IV. 253—Nuyt's Land, ib NYASSI, African lake, XVI. 896; II. 215;

XVII 600 Nyctaginaceæ, nat. order of plants, V 203

Nyctelia, genus of insects, IX. 129. Nycteribia, genus of insects, IX. 259 Nycteris, genus of mammalia, XIV. 149. Nyctibius, genus of birds, XVI. 759. Nycticorax, genus of birds, XVI, 799. Nyctonomus, genus of mammalia, XIV.

NYIREGYHAZA, town in Hungary, XVI.

Nyitra, town in Hungary, XVI 156 NYKOPING, town in Sweden, XVI. 396. Nyl-ghau, in zoology, XIV. 210. Nymegen, town in Holland, XVI. 271. Nymphæ, in anatomy, III. 71.

#### NYM-OBL

Nymphæaceæ, nat. order of plants, V. Nymphalis, genus of insects, IX. 208 Nymphomania, XIV. 532 Nymphon, genus of arachnides, III 386 NYMPRS, XVI. 396. Nysson, genus of insects, IX. 196 Nyssones, tribe of insects, IX. 195. Nysten on the aorta, IL 790.

# 0

O, letter, XVI. 397-interjection, ib -in abbreviations, II. 19.

Oahu, one of the Sandwich Islands, XVIII. 270-climate, 271.

Oajaca, Mexican state and city, XIV. 725, 718-antiquities of, 719

OAK, XVI 397; V 86, 113, XVII 755; XXI 268—age attained by the, II 285 -British, XVII. 757-evergreen, 761-Turkey, 1b .- Turner's, 1b -- live, ib -different species, 765 - American, 1b — oaks in Derbyshire, VII 754 — reverenced by the Druids, VIII 184—specific gravity of, XII. 88, 89—poisonoak, V. 190-growth of, XXI 269-large oaks, 270—different species, ib.—foreign

oak-timber, 276.

knights of the, Moorish order of chivalry, XIII. 121.

- order of plants, V. 208 Oak-bark, its use in dyeing, VIII. 304, n 3-in tanning, XIII. 306.

—in tanning, XIII. 500.

Oak-leaf galls. See Gall.

Oak-timber, XVII 755, 788, XXI 270—
its use in joinery, XII 817—for the
navy, XVI. 100, 101; XX. 118, 166 shrinkage of, in seasoning, 168 cation of, 170—strength of, 171, 172, 757, 758—size of, XXI 271—value, ib sowing of acorns, 272-measuring of, 280.

OAKHAM, or Okeham, in Rutland, XVI. 397—canal to, XIX. 555. Oannes, Chaldac legislator, XV. 763.

OASES, XVL 397

OATES (Titus), XVI. 397; V. 427. OATES, XVI. 398—oath of allegrance, II. 588—Arabian, III 352—of calumny, VI 105—coronation oath, VII 412—of supremacy, VIII. 700—regarded as anti-christian, by Quakers, XVIII. 717. See Perjury.

Oatmeal, absorbent property of, VII. 108. Oats, spikelet of, V. 113-flower of, 125seed, 138-culture and varieties of oats, II. 310—quantities used as seed, 311—manures for, 312—diseases of, ib.—as food, IX. 758-analysis of, 759. See Corn-laws

OAXAGA, XVI. 399. See Qalaca. Ob, river. See Obe OBADIAH, the prophet, XVI. 299. OBAN, in Argylishire, XVI. 399, III 527 OBE, Obi, or Oby, river in Siberia, XVI. 400; XVII. 605, 647; XIX. 548, XXI. 297, 303,

Obedience to law, XIII 253. Obeid, African town, II 225; XIII. 131. OBELISK, XVI. 400; II 472; III 457, 458; XI. 387, 407; VIII 508-as gnomons, VII. 778; X. 464—at Forres, IX. 787. Oberhauser's microscope, XIV. 779. Oberland (Bernese), IV. 670. OBERLIN (Jean Frederic), XVI 400.

(JEREMIE JACQUES), XVI. 401. OBERNAI, or Oberchnheim, town in France, XVI. 401.

OBIDOS, town in Portugal, XVI. 401. OBJECT AND OBJECTIVE, SUBJECT AND SUB JECTIVE, XVI. 401 Object-glass micrometer, XIV. 746

Object-glasses, in telescopes, XXI. 124 et seq Oblata, genus of fishes, XII. 287 Oblate, XVI. 401—oblateness of the earth,

I. 853

Obligation, created by law, XII. 255 moral, XV. 563. See Ethical Philosophy. OBLIQUE, XVI. 401-cases, X. 748.

## OBO-OCT

OBLONG, XVI. 401. Oboe, XV 710 OBOJAN, town in Russia, XVI 401. OBOLUS, XVI. 401, 359; VII. 67. fossil mollusks, XVII. 105. O'Brien (Smith), V 671; XII. 502 Obrum, genus of insects, IX 145. Obscenity, its prevalence in the middle ages, VI 610

OBSERVATORIES, XVI 402; I 847-establishment of, 616—principal, III. 816—magnetical, XIV. 18—in Belgium, IV 623-Edinburgh, VIII. 400-Germany, X. 592—Glasgow, 653—Greenwich, XI. 47—Italy, XII 662

Observing machines, XIV. 414 Obsidian, mineral, XV. 72, 132 Obstetrics, XIV. 463. Obstruction, disease in domestic animals,

XXL 564, 568.

Obverse, in coins, XVI 353 Obwalden, in Switzerland, XXI 494 OBY, island, XVI, 402

Ocana, town in Spain, XVI 402. - town in New Granada, XVI. 402. Occam, or Ockham (William of), XVI. 402, 285—doctrines held by, I. 326, 328 —on moral evil, 435—his theory of rectifude, XV. 550—on logic, XIII.

Occipital bone, in man, III. 18-in the mammalia, 78.
OCCULTATION, XVI. 402—of plants and

585. n

stars by the moon, IV. 50-of Jupiter's satellites, 70

OCCUPANCY, in law, XVI. 402. Occupations of the inhabitants of Scotland, XIX. 804; of London, XIII. 660,

of the United States, XXI. 424. OCEAN, XVI 402; X. 488, XVII. 572 et CEAN, XVI 402; X 483, XVII. 572 et seq —southern, colder than northern, II. 673—its influence on climate, III. 736; VI 770—temperature of, XIV. 644—currents of, 652 (see Currents)—luminosity of, XIII. 458. See See, Tides, Atlantic, Pacific, &c.

OCEANIA, XVI. 402. See Australasia Oceanic stock of people, IX 346. Oceanides, water-nymphs, XVI. 396. OCEANUS, in mythology, XVI 402. OCELLUS LUCANUS, XVI. 402—on spiritual

essences, III 308 Ocelot, in zoology, XIV 170 OCHIL HILLS, in Scotland, XVI. 408; VI. 749, 750, XVII. 457; XIX. 791.
OCHNO or Ochinus (Bernardino), XVI.

402. Ochnaces, nat order of plants, V. 189. Ochran, muncial, XV 84 Ochres, XV. 112—yellow ochre, 108. Ochsenheimer, his work on lepidoptera,

IX. 12. Ochterlony (Sir D.), XI 506, 508; XVI. 148-his monument at Calcutia, VI.

Ochthera, genus of insects, IX. 256. Ochthiphila, genus of insects, IX 256. Ockham (William of). See Occam. Ockley (Simon), orientalist, XVI. 403. Ockzakoff, IV. 743-dispute in 1791 about, V. 538.

O'Clery (Michael), VIII 106 OCLISEER, town in India, XVI 408 O'CONNELL (Daniel), XVI 408; V. 641; XII. 501-elected member for Clare, V. 658, 656—his progress through Ireland, 656—his anti-union agitation, 659—his plan of reform, 657—his attack on the king's speech in 1833, 663-his death at Genoa, 670—as an agitator, II 240—Sir R. Peel's challenge to, XVII. 362— Shell's co-operation with, in the repeal agitation, XX. 100.

Octædrite, mineral, XV. 110 Octæteris, Greek cycle, VI. 665. Octagon, XVI 404. OCTAHEDRON, XVI 404; XV. 41.

Octastyle, in architecture, III. 511. OCTAVIA, sister of Augustus, XVI. 404.
—— wife of Nero, XVI. 405.

Octavianus, or Octavius Cæsar, XIX. 328. See Augustus.

Octher, northern navigator, XVIII. 161.

# OCT-OER

OCTOBER, XVI. 405-Gardening Calendar for, XI. 760 - Equus, XVI 405 Octogonotes, genus of insects, IX. 150. Octopoda, section of mollusks, XV. 400 Octopus, genus of mollusks, XV 401, 395. Octroi, French tax, X. 273, 275; IX. 448. Oculina, fossil coral, XVII. 96 Oculinidæ, polypes, XXI. 1005. Ocydromia, genus of insects, IX. 235. Ocypete, genus of anachnides, III 389. Ocyptera, genus of insects, IX. 248 Ocypteræ, family of insects, IX 244. Ocypterus, genus of buds, XVI. 748 Oczakow See Ockzakoff. Odax, genus of fishes, XII 268 ODE, in poetry, XVI. 405; XVIII 102, 105, 123 See Lync poetry Oderpore, Indian raj, XVI 405. Odeium, in ancient Athens, IV 165, 170 ODENATHUS, Plince of Palmyra, XVI 405; XVII 221, XIX, 349 ODENSE, town in the island of Funen, XVI. ODENSWALD, German mountains, XVI. ODER, river, XVI. 405, IX 384, 385, X 582, XVII. 605, 647, XVIII. 284, 662, XX. 274. ODESSA, Russian city, XVI. 405—port and trade of, IV. 743, 746—corn trade of, VII. 408—bombardment of, XIX. 501 Odier (Dr L), on mortality at Geneva, XV. 622 (M), on the coverings of insects, TX. 29. ODINAM, town in Hampshile, XVI 406. ODIN, XVI. 406; XV 767; X. 300—his worship incentive of suicide, XX. 799 Odo, VIII. 659 ODOAGER, XVI 406; XIL 640 Odocantha, genus of msects, IX. 82. Odometer, XVII 406 O'Donnell (Count del Abisbal), XX. 475, 476, 483 Odontacanthus, genus of fossil fishes, XVII 117. Odontaspis, genus of fishes, XIL 324; XVII 118, 119. Odonteus, genus of fossil fishes, XII 344 Odontognathus, genus of fishes, XII. 237. Odontograph, XIV. 396. ODONTOLOGY, XVI. 407. See Teeth. Odontosaurus, fossil reptiles, XVII. 139. Odontostomus, genus of fishes, XII. 248. Odornferous bodies, effect of electricity on, VIII. 599. See Odours.
Odours of flowers, V. 152—caused by essential oils, XVI. 492—of plants, XVII. 408 ODRYSÆ, Thracian tribe, XVI. 485. Odynerus, genus of insects, IX. 197. Œacides, king of Epirus, IX. 277. ŒCOLAMPADIUS, XVI 485 Œcophora, genus of insects, IX 219. GECUMENICAL COUNCILS, XVI 485; VII Œdaha, genus of insects, IX. 235 Œdemera, genus of insects, IX 133 Œdemerates, tribe of insects, IX. 132. OEDENBURG, town in Hungary, XVI 485. Œdicnemus, genus of birds, XVI 797 Œdionychis, genus of insects, IX 150. ŒDIPUS, Grecian king, XVI 485 Œgopsidæ, family of mollusks, XV. 399 OEHLENSCHLAGER (Adam Gottlob), XVI 486; VII. 750; XVIII. 120; XIX. 695. Oeland, Island, XVI. 508. OELS, in Prussia, XVI 488. Oeltzen's catalogue of stars, IV. 95. OENIADAE, town in Acamania, XVI. 488. OENOTRIA, XVI. 488; XII. 683. OERSTED (Hans Christian), XVI 488; VII 750; XIX 696—his early studies, I. 973—his discovery of electro-magnetism, 739, 973; VIII. 531, 600; XIV. 11; XXI. 638—details respecting it, I. 973-receives the prize of the Institute of France, 976-his scientific character, ib .- death, 977-on the compressibility of water, XII. 78; I. 723, 976-on voltaic electricity, XXI. 627—his improved

#### OER-OKE

electrical multiplier, 642-his compound circuits, 651 Oersted (Andreas), VII. 750 Oerstedtite, mineral, XV. 91. OESEL, island, XVI 488, IV. 404—geology of, XIX 517 Œsophagotomy, XXI 565. Œsophagus. See Esophagus Oesterline (Mademoiselle), Mesmer's treatment of her case, XX. 416. Œstracides, family of insects, IX. 245 Œstrus, genus of insects, IX. 245—of the reindeer, XIII, 236, Estrymnades, XVIII. 161, n. 2. Œta, mountain in Greece, XL 12. OETINGER (F. Christoph), XVI 488 Oeyras, town in Brazil, climate of, V 293, OFANTO, river in Italy, XVI. 488; XIL. 638; XX. 238. Ofen, or Buda, V. 723. OFFENBACH, town in Hesse Darmstadt, XVI. 488. OFFENBURG, town in Baden, XVI 489 Officinal, XVI. 489 Officts, in canals, XVI, 57. Offor, his edition of Tyndale's New Testament, XXI 400.
Offsets of plants, V 79
Offspring, care of, XIV. 441 Ofverbom on temperature, XIV. 674. Ogané, African chief, IV 653. OGDENSBURG, town in New York, XVI 489. OGECHEE, or Ogeechu, river, XVI 489; X. 565 Ogee, in architecture, IIL 511 Ogg (Mr), on the use of salt in preventing dry rot, VIII 211. OGILVY (John), XVI. 489. Ogyges, IV. 192; VII 710. O'Higgins (General), VI 553. Onio, American state, XVI. 489; XXI 419-debt of, 428-wines, 888. - river, XVI. 491, 489, XVII. 395, OHLAU, or Olau, town in Prussia, XVL 492. Ohm (Georg Simon), L 982-his laws of electrical corduction, ib, 983; XXI. 623-deductions from, I 984 OHRDRUF, in Saxe-Coburg Gotha, XVI. OICH (Loch), XVI 492; XII. 438; XIX. 807. Oidemia, genus of birds, XVI. 816 Oldum Tuckeri, vine disease, X. 246, n 247; XXI 885, 887. Oikel, river, XX. 841; XIX. 425. Ones, XVI. 492; XVII. 409—plants yielding, II 335; IX. 761—their use in angling, III. 156, n.—in lamps, XIII. 169in lighthouses, 480—in decreasing friction, XIV. 405-in preserving timber, VIII. 212-for clocks, VII. 38-in plants, V. 73—made in Brazil from turtles' eggs, 209-alimentary qualities of, VIII. 20surface of the water calmed by, 57imports of, into the United Kingdom, 734, 735-filtering of, IX. 582-specific gravity of various kinds of, XII 89—capillary attraction of, 92—in articles of food, XIX 611—French, X. 255— olive-oil, V 199, XI 16, 32; XII 445, 451; XVI 494—of jasmine, V. 199 cajeput oil, VI. 63-cod-liver oil, XVI. 328, 493-pilchard oil, VII 408-castoroil. (see that entry) - of the cahoun tree, XI. 610-volatile oils, VI 517, 518 -fixed oils, 517-winter green oil, XVII. 409-of pimento, 710-rosin-oil,

Oil-gas, X. 427-compared with coal-gas 429-its deterioration by keeping, 432. Oil,-painting, XVIL 60, 63. Oil-thermometers, IV. 457; XXL 221. Oıl-varnishes, XXL 526. Oinomania, XIV. 533. OISE, XVI. 497. OKA, Russian river, XVI. 498. ORAMANDEL, in British India, XVI. 498. O'KEEFFE (John), dramatist, XVI 498. OKEN (Lorenz), naturalist, XVI 498.

XIX. 87—as a preservative against vermin in domestic animals, XXI 579.

745

OLIVET (Joseph Thoulier d'), XVI. 508.

Ohvia, treaty of, XX. 852.

on ants, III. 261

Olivetan (Robert), his French Bible, IV

OLIVIER (G. Antoine), entomologist, XVI.

508-his entomological works, IX. 8-

Olivine, mineral, XV. 89-crystals of, in

basalt, 183, 190. Olmsted (Prof.), on the geology of North Carolina, VI. 246.

## OKE-OLM

Okenite, mmeral, XV. 76 O'Keys, impostors as magnetic somnambulists, XX. 427, 432 Olaf (St), XVL 317. OLAND, Island, XVI. 503. Olafieta (General), IV. 813. Olau. See Ohlau Olave's invasion of England, VIII. 661. Olax, order of plants, V 185. Olber's (Dr), his discovery of comets, I 835; of Pallas and Vesta, ib; III 808; IV 68, 69-on the orbits of comets, VII 169. Olcott (H. S), on the Chinese and African sugar-canes, XX. 798 Old age, XIV. 425. Oldacre (Isaac), his method of raising mushrooms, XI. 736. OLDCASTLE (Sir John), Lord Cobham, XVI 503, VIII 688 See Cobham (Lord).
town in Iteland, XVI 504. OLDENBURG (Grand Duchy of), XVI. 504 -postal system of, XVIII. 424-weights and measures, XXI 812 —— (city), XVI 505 (HENRY), XVI 505; IX 672, 673 Oldfield (Mrs), actress, XXI. 172, 175. OLDHAM, in Lancashire, XVI 505——— (JOHN), poet, XVI. 506. Oldhamia, fossils, XVII 96, 98. Oldham's coupling of parallel axes, XIV. 397. OLDYS (William), bibliographer, XVI. 507. Oleaceæ, nat order of plants, V 199 Oleaginous principles from plants, IX. OLEARIUS (Adam), traveller, XVI. 507on the use of tea in Persia, XXI 88. Oleaster order of plants, V. 205. - XVII 764. Oleflant gas, specific gravity of, XIL 89 Oleg, XIX. 469 Oleic acid, II 381. OLERON, Island, XVI 507; VI. 422 Olfactory nerves, XVII 675. Olga, XIX. 470. Olibanum, V. 190. Oligoclase, mineral, XV. 71. Oligon spar, XV 100. Olm (Dr), his account of modern Jerusa lem, XII 745-on Judea, XVII 184. Ohna on ornithology, XVL 725. OLINDA, city of Brazil, XVI 507; XVII. Olistes, genus of fishes, XII. 297. OLIVA (Fernan Perez de), XVI. 507. - town of Spain, XVL 507. genus of mollusks, XV. 386-fossil, XVII 110. OLIVAREZ (G. G., Conde Duque de), XVI 507: XX. 470. Olivary bodies of the brain, III. 55. - oil, XVI. 494; XI 16, 32, XII. 445, 451, 640; IX. 761; XX. 248—specific gravity of, XII. 89.
Olive-colour, in dyeing, VIII. 312, 313, Olivenite, mineral, XV. 103 OLIVENZA, town in Spain, XVI 508. OLIVER (Isaac), miniature-painter, XVI. (le Dian), X. 28. (Peter), XVI 508. OLIVES (Mount of), XVI 508; XII. 736,

161 OLM—ONO OLMUTZ, in Moravia, XVI 509-university of, XXI 492 OLNEY, in Bucks, XVI. 509. - Hymns, XII 189. OLONETZ, in Russia, XVI 509; XIX. 521. Olonois (L'), a bucaneer, V. 710. Olophernes, VI 222. OLORON, town in France, XVI 509. OLOT, town in Spain, XVI 510. OLTENITZA, XVI 510, VII. 674. Olympeium, in Athens, IV 163. OLYMPIA, in Greece, XVI 510. OLYMPIAD, XVI. 510, VI. 665 OLYMPIAS, mother of Alexander the Great, XVI 510 OLYMPIC GAMES, XVI. 511, 510, 364; VI. 665; X. 398-their influence on Greek art, XVII 50—judges at, XL 289. —— year, VI. 665. OLYMPIODORUS, XVI 511 OLYMPUS, mountain, XVI. 511; XI. 10, 11—height of, XVII 642 OLYNTRUS, XVI 512—Olinthians, XIII. 763-their submission to the Macedomans, 761 OMAGH, town in Iteland, XVI. 512, XXI. 408 Omalisus, genus of msects, IX. 107. Omalium, genus of insects, IX 104, OMAN, in Arabia, XVI 512; III. 359. OMAR I. (A. H. Ibn-al-Khattab), XVI 512; III. 362-mosque of, at Jerusalem, XIL 744—capture of Jerusalem by, 734—his conduct regarding the burning of the Alexandrian library, IL 471; XIII. 381; - II., XVI. 513. ——— (Pasha), XIX. 500 x XXI. 375. Ombos, ruins of, VIII 514 OMEN, XVL 513. OMER (St), town in France, XVI. 518population, X. 277. - Jewish measure, VIL 421. OMERCOTE, town in India, XVI. 513. OMETEPE, island, XVI 513. Ometas, genus of insects, IX. 123. Omichund, V 476. Ommastrephes, genus of mollusks, XV. Ommiades, dynasty of the, III. 363. Omnibus, carriage, VII 42—omnibuses in London, XIII 679—New York, XVI. Omnipotence of God, XXI. 191. Omnipresence of God, XXI 190. Omniscience of God, XXI. 191. OMNTOM, XVI. 514 Omoa, port of, in Honduras, XI. 612. Omophron, genus of insects, IX. 98 Omphalodes, dyeing hchen, VIII. 289. Omsk, town in Russia, XVI 514. OMUN, town in Guinea, XVI. 514 On, city, XVI 514. See Heliopolis. Onagraceæ, nat. order of plants, V. 192. Onatas, Greek sculptor, XVI. 514, XIX.

Onchuna, genus of entozoa, XXI. 982. Onchus, genus of fossil fishes, XII. 339; XVII. 116. Oncidiadæ, family of mollusks, XV 374. Oncidium, genus of mollusks, XV. 374 Oncidoris, genus of mollusks, XV. 374. Oncoceras, fossil mollusks, XVII 112. Onda, town in Span, XVI. 514 O'Neale, or O'Neill (Sir Phelim), his re-bellions in Ireland, V. 399; XII. 476, 478, 481, 185. ONEGA, Russian lake, XVI. 514; XIX. 516.

GULF OF, XVI. 514-cape, XIX. 516 ONEGLIA, in Sardinia, XVI 514. Ongol, town in India, XVI 514.
Onion, culture of, XI. 741—potato onion, 1b.-pearl, ib. Oniscides, crustacea, VII. 543. Omiticellus, genus of insects, IX 119. Omitis, genus of insects, IX. 120. ONKELOS, Jewish rabbi, XVI. 514—Targum of, IV. 697; XIX. 839; XXI. 23. Onkosin, mineral, XV. 84. Onnos, Egyptian king, VIII. 455. Onofrite, mineral, XV. 117.

ONO-OPI Onomatopœia, XVI. 514. Onondaga group of rocks, XV 199. Onomaga group of rocks, XV 135.

—— salt springs, XVI 215
ONOSANDER, philosopher, XVI. 514.
ONTARIO, lake, XVI. 515; VI 184 XVII. 605-harbours on, XVI 214 ONTENIENTE, town of Spain, XVI 515 Onthophagus, genus of insects, IX 119 Ontological proof of the existence of God XXI. 186. ONTOLOGY, XVI. 515, XIV. 603, 555, 610. Onychoteuthis, genus of mollusks, XV 399—fossil, XVII 114 ONYX, XVI. 515; VI 67, II. 231; XV. OOCHEYRA, in India, XVI 515 OODEPOOR CHOTA, in India, XVI 515. OODEYPOOR, in India, XVI 515. OOJEN, city in India, XVI 515. Oolite, XV 92, 146—period of the, 206 rocks, 206, 207-flora of, V. 236; XVII 641-boring of, V 44-corals, XVII 97 — bryozoa of, 98 — fishes, XII 350: XVII 126, 127, 640—in Scotland, XIX 793-as building-stones, XX. 712-in Sutherland, 841. Oom-er-Begh, nver, XV 594. OOMRAWUTTEE, town in India, XVL 515 Oondee oil, XVI. 496 Oophoridium, in botany, V 144 Ooral. See Ural. OORCHA, town in India, XVI. 516; V 763, 764. Oonans, XI 466. OORT (Adam Van), painter, XVI. 516 OOSTERHOUT, town in Holland, XVI. 516. OOTAKAMUND, town in India, XVI. 516. Ootradioog, in Hindustan, XI 489. Ootrophic organs, III. 70 Opacity, XIII 451; XVI. 551—in minerals, XV. 58. Opal, XV. 69—specific gravity of, XII 88—mines of, in Honduras, XI 613. Opalescence, XV. 58 Opatrum, genus of insects, IX. 130. Opdam (Admiral), V 422; XI 576 Opelousas, in Louislana, XIII 699 OPERA, XVI 516-French, II 68-Italian, VIII 147-English, 165. Opera-house, London, XIII. 675; XXI 174 Operations in surgery, XX 820 Operculata, section of mollusks, XV 375.
Operculum, in botany, V. 145—in mollusks, XV. 366 et passim. Opetiorhynchus, genus of birds, XVI 769. Ophelia, genus of annelides, XI 299. Ophelias, his alliance with Agathocles, VI Ophicephalus, genus of fishes, XIL 289, OPHICLEIDE, XVI. 516; XV. 711. Opindia, XVII. 634, XIX. 39—fossil, XVII. 153—dental system of, XVI 431—geological distribution of, XVII. 154, 634—number known, XIX 51, n. Ophididæ, family of fishes, XII. 268. Ophidium, genus of fishes, XII. 268. Ophioglossaceæ, sub-order of ferns, V. OPEROLOGY, XVI. 516 See Reptilia. Ophion, genus of insects, IX. 191 Ophiopsis, genus of fossil fishes, XII 335 Ophiostoma, genus of entozoa, XXI 980. OPHE, XVI. 516; VIL 185; X. 460; XV. 530; XXI. 27. Ophisaurus, genus of repules, XIX. 41. Ophisternon, genus of fishes, XII. 231. Ophisuridæ, family of fishes, XII 232. Ophisums, genus of fishes, XII. 232. Ophites, gnostics, X. 688 Ophiura, XXI. 992, 993, 995 Ophiuridæ, star-fishes, XXI. 984, 992, 995 —fossil, XVII. 99.

Ophiurus, genus of fossil fishes, XII. 347.

Ophirus, genus of lossi innes, XII. 347.
Ophrycssa, genus of reptiles, XIX. 34.
Ophthalmia, in Egypt, VIII. 422, 428—in
New South Wales, IV. 279—successful
mode of treatment, VIII. 423, n. 9—in
the domestic animals, XXI. 577.
OPIE (John), painter, XVI. 517—his pictures, III. 716; XVII. 80

- (AMELIA), XVI. 517

OPI-ORA Opinion, the Economists on, VIII 377, 378-its influence on laws, XIII. 259-Plato on, XVII 797, 798. Opis, fossil mollusks, XVII, 108 Opisthocœlia, fossil reptiles, XVII 152. Opisthocomus, genus of birds, XVI. 786 Opisthodomus, in architecture, III 511 Opisthognathus, genus of fishes, XII 310 OPITZ (Martin), German poet, XVI. 517poetry of, XVIII. 118. OPTUM. XVI 517-an alimentary substance in the East, III 179-of Hindustan, XI 453, 528 specific gravity of, XII. 89poisonous quality of, XIV. 436—XVIII 127, 128, 130—trade, in China, VI 591, 596-its effect on the brain, XVII. 702. - poppy, V. 182. Oplichthys, genus of fishes, XII 282 Opobalsamum, IV 401. Opomyza, genus of insects, IX. 256. Opoponax, V. 195 OPORTO, XVI 518-revolution at, in 1820 XVIII 388-newspapers, XVI. 203porcelain factory near, XVIII 438-wine trade of, XXI. 885. Opossum, XIV. 174; XVII 631-dentation of XVI 448. Oppeln, in Prussia, XVI. 520; XX 275 Oppert (Jules), on the inscribed tablets of Assyria, XIII. 382 Offian, Greek poet, XVI 520—on hunting, XII. 32—his works, XIV 124. OPPIDO, town of Naples, XVI. 520 Oppidolo, XVII 229. Optative mood, X. 769. Optic nerves, III. 45; XIII. 460, XVII 675, 678 paradox, I 897.

Optical instruments, XVI 696—improvement in, III 808 See Camera, Lens, Micrometer, Telescope, &c properties of minerals, XV 56. OPTICS, XVI. 521-history of, ib., I. 619-631, 661-670, 746-755, 800, 801, 893-925-contributions of Euclid, 619, 896; Ptolemy, 620, Alliazen, 622, 623; Aristotle and Epicurus, 621; Roger Bacon, 623; Maurolycus, 624; Baptista Porta, 1b , Kepler, 625; Antonio de Dominis, 1b ; Snellius, 627, Descartes and Fer-628, 629; James Gregory, 629, Dr Barrow, 630; Grimaldi, 1b; Huy-gens, 1b, 631, 895; Newton, 661; Descartes, Hadley, Mayer, Dolland, &c., 747-749; Dr Robert Blair, 751, Fraunhofer, 752, 915, Sir W. Herschel, 752; Malus, 755, 901, 902, Thomas Young, 893, 896, Hooke, 895; Fresnel, 899, 903, Arago, 907; Blot, 909, 916, Foucault, 910; Sir David Brewster, 911; Seebeck, 916, Sir J Herschel, 917; Airy, 1b, Sir W R. Hamilton, 918; Dr Lloyd, ib.; Maccullagh, 919; Cauchy, 919, 920, Jamin, ib; Rudberg, Powell, &c., 920, 921; Ritter, 921; Wollaston, Mrs Somerville, Niepce, Daguerre, Talbot, 922, 923, Stokes, Wheatstone, 924, 925 (see all these articles)-principles of the science applied to the improvement of lighthouses, 753-first notions of photometry given by Marie, ib—successive propa-gation of light, IV. 74—corona or halo, VII. 410 - optical phenomena of the atmosphere, XIV 679—optical proper-ties of minerals, XV 56—changes induced by magnetism, I. 981. Astronomy, IV. 51, Aberration, Achromatic Telescopes, Burning-glasses, Camera, Chromatics, Colours, Kaleidoscope, Light, Polarization of Light, Metcorology, Micrometer, Microscope, Photography, Photometer, Refraction, Reflection, Spectrum, Stereoscope, Telescope. Optigraph, VI 119. OPTIMIEM, XVI. 698—Leibnitz's scheme of. I. 126. Opyornis, extinct bird, size of its egg, XVII 637.

On, in heraldry, XVI 698; XI 324. ORA, Saxon coin, XVI. 698; VII. 71, - Tube. See Uratepe. Oracanthus, genus of fossil fishes, XVII.

117

ORA—ORD

Orache, garden plant, XI. 741 ORACLE, XVI. 698, VII 617—of Didona, VIII. 88—Delph, VII. 709—Fontenelle's History of, IX. 754. ORAN, In Algeria, XVI 699, II 571, 574, 575

Orang-outang, XIV. 137, 138; XVII. 631
—its skull, III 77—dentition, XVI. 456. ORANGE, town in France, XVI 699

 fruit, XVI 700—sweet and bitter. V 185, 186-oil receptacles in the rind of, 73-imports of, VIII 735

order of plants, V 185
peel, oil of, XVI 496; of the flowers, 1b.—of the leaves, 1b. - RIVER, XVI 699, II 214; X. 711

- Sovereignty, XVI 700 - tree, culture of, XI. 729-specific gravity of, XII. 89-perfumes from. XVII 408.

Orange-coloui, dyeing of, VIII. 298, 312, 318

Orangemen, Irish party, XII 497. Oration, funeral, X 345 ORATORIO, in music, XVI 700 Orators, among the Drinds, VIII 189parliamentary, of the present day, XVII 300

ORATORY, XVI 700. See Rhetoric Oravicza, town in Hungary, XVI. 700 ORB, town in Bavaria, XVI. 700 Orbelus, mountain, XI. 10, 11. Orbiculata, family of crustacea, VII, 541

Orbigny (M. d'), his classification of South American tribes, IX 349 - on fossil sponges, XVII 92; shells, 93; corals, 97, bryozoa, 1b, crinoidea, 98-zoo-phytes, XXI 1007.

Orbitoides, fossil shells, XVII 93, 94 Orbits of the skull, in man, III. 30the mammaha, 79

of comets, the sun, planets, and satellites See these articles respectively.

ORCAGNA (Andrea), artist, XVI 700; XVII 62, XIX 860.

- (Bernardo), XVII 62 Orcanthus, genus of fossil fishes, XII. 339. Orchan, XXI 368

Orchard, XVI 700; XI 697—orchards in Bengal, IV. 649; in Herefordshire, XI 349, Lanaikshire, XIII 174. Orchesia, genus of insects, IX 132.

Orchestes, genus of insects, IX. 140. ORCHESTRA, XVI 700; XV. 741—in Greek theatres, VIII 135

ORCHESTRINO, XVI 700. ORCHESTRION, XVI 700 Orchidaceæ, nat. order of plants, V. 211.

ORCHILLA WEED, XVI. 700; V. 217. Orchis, plant, V. 211. ORCHOMENUS, city of Arcadia, XVI 701.

city of Bœotia, XVI 701. Orco, falls of the, XVII. 604.

Orcynus, genus of fossil fishes, XII. 345. ORDEAL, XVI 701-trial by, XIII 22; in Madagascar, 793; in Burmah, V. 780.

Order, in architecture, III. 511—orders described, 441, 442, 451, 463—Greek, 463-Roman, 469-Modern Italian, 477. of plants, characters and arrange-ment of, V. 180—their distribution over

the globe, 222 — phrenological faculty, XVII 563
ORDERICUS (Vitahs), XVI. 702
ORDERS, in the church, XVI. 702

- religious, in the Romish Church, XVI 702. See Monachism, Mendicants, Ac. &c.

- holy, XVI. 702, 703, 704. See Ordination.

- in natural history, V. 176 - in mineralogy, XV. 68—sub-orders, V. 175.
— of knighthood, XIII 122, 123. See Knights and Knighthood.

Ordinance, in architecture, III. 511. Ordinances, religious, errors regarding, L 535, 536

Ordinaries, in heraldry, XL 327. Ordinates, X. 548—to describe an ellipsis by, XX. 726.

ORDINATION, XVI 702—form of, in apostolical times, not fully recoided, I. 494;

ORD-ORI

reasons of this, ib -views of the Independents on, XII 371-Presbyteman, XVIII 482-it may have happened, in the church, that some one who never underwent ordination, may have ordained others, I. 503-no one can trace his ordination up to the time of the Apostles, 1b

ORDNANCE, XVI 704—tables of, XL 133—early use of, 150, XVI 98. See Artıllery, Cannon, Gun, Navy.

department of the British army, III 664-map office at Southampton XX 452—survey, see Trigonometrical Survey.

Oreades, mountain-nymphs, XVI 396. OREBRO, town in Sweden, XVI 705 OREGON, territory of the United States, XVI. 705; XVII 594

Oreinus, genus of tishes, XIII 257. Orein, in Russia, XVI 706, 707; XIX. 521.

ORELLANO (Francisco), XVI 706 ORENBURG, in Russia, XVI. 707, 708, XIX 521.

ORENSI, XVI 708-province, X 372, 373 Ores, in mineralogy, XVI 704—of non, XII 539—saline ores, XV. 99—sparry iron, 1b—oxidized ores, 107—tin ore, 109—manganese, 111—red copper, 112 -grey antimony ore, 118-grey copper, 120. See Mines and Mining, Smelting. ORESTES, XVI 708

Orestias, genus of fishes, XII 252 Oreus, city of Eubœa, XI 536 Опран, town in Turkey, XVI 708.

ORFILA (M-J-Bonaventure), XVI. 708— his work on poisons, XIV. 424—on poisons, 434, 436.

ORFORD, town in Suifolk, XVI. 709. Orgagna (Andrea), XVI 700.

Organ, musical instrument, XVI. 709; XV. 740—at Haarlem, XI. 173—a nove one suggested, II. 108—at Birmingham.

mountains, XIX. 174 Organic and inorganic bodies, VI 502, II 747, XVII 648

- chemistry. See Chemistry, Or-- rocks, XV 130, 142

- rocks, Av 180, 112 - remains, in volcanic rocks, XXI '. See Palæontology. Organisation, molecular theory of, XVII.

649—cell theory, 651 — of literature and art, XIX. 107.

Organism, definition of the term, XVII. ORGANO-LYRICON. musical instrument.

XVI. 713.

Organs of the human body, II. 777-classufication of, III. 3. Organzine silk, XX. 281.

ORGIA, XVI. 714 Orgym, genus of insects, IX. 214. ORIA, town in Spain, XVI. 714.

town in Naples, XVI 714.

Oribasius, Greek physician, XVI. 714; II. 751; XIV. 455—his knowledge of surgery, XX. 813.

surgery, A.S. 510.
Ornbats, genus of arachnides, III. 388.
Ornent (L'), town in Fiance See Lorient
Ornental, crystallisation of, VII 563

— historians, XI 548—coins, XVI.
390—versions of the Scriptures, XIX.

Orifice, in hydraulics, XII 111—theory of fluids issuing from, 103; experiments on, 111.

Orniamme, standard, IV. 242.
Orngen, XVI. 714 — friendship between him and Ambrose, IL 662—on apparations, III. 311—on the millenium, XV. 14-his Hexapla, XI. 864; XVIII. 266; XIX. 840-Huet's edition of his works, XI. 793.

Origenists, sect, XVI. 715. Oriuuela, town in Spain, XVI 716.
Oriuuela, town in Spain, XVI 716.
Oriuoela, river, XVI 716; XVII. 604,
647—basin of, IL 668—llanos of, XVII.

Oriole, golden, XVI. 754-Baltimore, 763 -red-shouldered, 762.

# ORI-ORP

Onolus, genus of birds, XVI 754 ORION, XVI 717-nebula of, I. 842, 843. - constellation, IV. 80.

ORISSA, XVI 717

ORISTANO, town in Sardinia, XVI 717. ORIZABA or Orizava, town in Mexico, XVI 717. XIV. 725

- or Orizava, volcano, XIV. 714; XVI 717

ORKNEY ISLANDS, XVI 717-fisheries, IX. 640, 642—barrows in, IV. 473—duns in, VIII 244-vitrified cairns in, IX 792agricultural statistics, XIX. 796, 797, 798-population, 799.

Orlando, Cape, XX 244. Orle, in heraldry, XI 330.

Orleannais, French piovince, X. 277. ORLEANS, city in France, XVI 722; XIII 636—centre employed in building the bridge of, VI 378, the finest piece of carpentry in the world, XX. 772-

university of, XXI 448 - (Duke of), his aerial voyage, II. 177—death of, in 1842, X 217.

— House of, XVI. 722 See France

island in the St Lawrence, XVI. 722

(Maid of) See Joan of Arc. NEW, XVI 722, 176 ORLEY (Bernard Van), painter, XVI. 722. ORLOFF, or Orlov (Gregory), XVI 723.

- (ALEXIS), XVL 723. ın Russia. See Orel. ORLOP deck, XVI 723.

Orme (Robert), historian, XVI. 728—on India, XI. 474, 475 Ormea, in the Sardinian States, XVI.

723

ORME'S HEAD (Great), XVI. 723. ORMOND (Duke of), XVI 723, VI. 28. ORMSKIRK, in Lancaster, XVI 723. ORMUZ, or Ormus, island, XVI 724; XI.

460—composed of 10ck salt, XVII 623. Orne, in France, XVI 724 river, XVI 724.

Orncodes, genus of insects, IX 219. Ornismya, genus of birds, XVI. 769. Ornithichnites, XVII. 154. Ornithobia, genus of insects, IX 259

ORNITHOLOGY, XVI 725-blood-globules of birds, II. 779—bones, III 74, 83—muscles, 92-mechanism of perching, ib -organs of smell, 94-cyes, 95, 97-ears, 99tongue, 100-vocal organs, 102-nervous system, 103, 104—stomach, crop, and gizzard, 109—intestines, 110 organs of circulation, 112-lungs, ibbrain, 104-pairing, 181-hybrids, XII. 63-hybernation, 62-order of the appearance of birds on the earth XVII 92-birds of Palestine, 192-development of the skulls of, 565-distribution of, 633 - respiration, XVIII 75 - Latham's works on, XIII. 247; Edwards' VIII 413-birds of the Polar Regions, XVIII 179-of America, IL 713bia, III 347 — Asia, 741 — Andubon's works on, IV. 238—Wilson's American ornithology, XXI 873. See Bird, Fowl-

the geographical articles. Ornithomyia, genus of insects, IX. 259. Ornithorhyneus, XIV 193; III. 75; IV. 260; XVII. 631—teeth and jaws of, XVL 419, 488, 440-in Tasmania, XXI

ing, Eagle, Hawk, Shooting, &c., and

Orobanchaccæ, nat. order of plants, V 202.

OROBIO (Baltasar), XVII. 1. Orobitis, genus of insects, IX. 140. Orodes, XVII. 311.

Orodus, genus of fossil fishes, XII. 340; XVII. 118. Orognathus, genus of fossil fishes, XII. 335; XVII 125.

Oronsay, lighthouse on, XIII 479. ORONTES, river, XVII 1; XX. 908. Orontiaceæ, nat. order of plants, V. 214. Oros, Egyptian king, VIII. 461

OBOSHAZA, town in Hungary, XVII. 1. Orosius (Paulus), XIII. 1. OROTAVA, in Teneriffe, XVII. 2; VI. 166. Orphan Hospital, Edinburgh, VIII. 402

## ORP-OSM

Orphan schools for seaman's children, XVI. 119

ORPHEUS, XVII 2-hymns of, XII 118 Orpiment, XV 122, VI 495-red, XV.

ORRERY (Earl of), XVII. 2. See Boyle (Charles).

- XVII 2, 753-is a mere plaything, IV 149—electrical, VIII. 554. Orris root, V 212 Orsielle, lichen See Archil.

Oisodacna, genus of insects, IX. 147 ORSOVA (Old and New), towns on the Danube, XVII 2

Ortalis, genus of insects, IX. 251. ORTELIUS (Abraham), XVII. 2 Orthacanthus, fossil fishes, XVII 117. Orthagoriscini, sub-family of fishes, XII 314

Orthagoriscus, genus of fishes, XII. 313, 314

ORTHEZ, town in France, XVII 3—battle of, V 614. Orthidæ, family of mollusks, XV 338-

fossil, XVII 104. Orthis, genus of fossil mollusks, XV. 338, XVII 104

Orthite, mineral, XV 90 Orthoceratites, fossil shells, XV. 394; XVII 112

Orthoceras, fossil mollusks, XVII 112 Orthocerus, genus of insects, IX 130. Orthochætes, genus of insects, IX. 140. Orthochile, genus of insects, IX. 244. Orthoclase, mineral, XV 70.

Orthodox, in theology, I 531, ORTHOGRAPHIC PROJECTION OF THE SPHERE.

ORTHOGRAPHY, XVII 3, II 611; X. 744 -m architecture, III. 511. Orthonyx, genus of birds, XVI. 753. Orthoptera, order of msects, IX 25, 153 Orthostyle, in architecture, III. 511. Ortilda, genus of birds, XVI 785. Ortiz de Retz (Ynigo), exploiatory voyage

of. IV. 262 Ortolan, bird, XVI 760. ORTONA, town of Naples, XVII. 3 Ortygis, genus of blids, XVI 792. Ortyx, genus of birds, XVI 791.

Onuno, in Bolivia, XVII. 8; IV. 821silver mines of, IV. 825-climate, 826population, 828. ORVIETO, town in the Papal States, XVII.

3-delegation of, 243. Orville (M. de), on Mount Ætna, II. 190

Orycteropus, genus of mammalıs, XIV. 191-teeth of, III. 105; XVI 413, 414, Oryctes, genus of insects, IX. 122

Orygma, genus of insects, IX. 254. Oryssus, genus of insects, IX. 134 Oryx, genus of mammalia, XIV 210 Osaka, or Osacca, city in Japan, XVII 3. Osbaldeston (George), XI. 676.
Osborne House, VII. 470; XXI. 862.
——eocone rocks, XV. 212, 213.

Oscan alphabet, II. Plate. OSCHATZ, town in Saxony, XVII 8. OSCHOPHORIA, festival, XVII, 3.

Oscillation of fluids, XII. 164-of pendulum, XVII. 376-time of performing an, XX. 157. Sec Pendulum.

(centre of), XIX. 436—James Bernoulli's mode of treating the problem respecting, I, 719. Osero, island, XVII. 4

O'Shaughnessy (Dr), on hemp, XI. 312. Osiers, their use in basket-making, IV. 487-cultivation of, 488. See Willow. Osmo, town in the Papal States, XVII 4. Osmis, XVII. 4; III. 620; VII. 711; VIII. 438, XI. 383—mysteries of, XV. 752—

exploits of, 1b. Osler (Mr), on the boring of shell-fish, XV. 358.

Osman, founder of the Turkish empire. XXI. 368, VII. 319—other sultans of that name, XXI. 369.

Osmanli, IX. 344, 388. See Turks. Osmazome, IX. 757; VIII. 19. Osmeroides, genus of fossil fishes, XII.

## OSM—OTH

Osmerus, genus of fishes, XII. 245-fossil, 347.

Osmia, genus of insects, IX. 200. Osmic acid, VI 499 Osmuidium, XV 113

Osmium, VI. 499 - discovery of, XXI 154.

Osmium-iridium, XV. 113 Osmont (J B L), notice of his Typographical Dictionary, IV 714 Osmundaceæ, sub-order of ferns, V. 216 OSNABURG, in Hanover, XVII. 4; XI 211. Osnaburgs, kind of linen, IX 784. Osorio (Geronymo), XVII 4 Osorkon, Egyptian king, VIII 463. Osphromenus, genus of fishes, XII. 289,

Osprey, bird, XVI. 743 Ossa, mountain in Thessaly, XVII 4, 372,

XI 12. Ossetes, IX. 390—their language, ib, XIII 216, XVII. 530,

Ossian, XVII 4-Dr Blair's Dissertation on, IV 750—Cesaiotti's Italian version of, VI. 389—Malcolm Laing's Dissertation on, XIII 158-Adelung's opinion of, 212, Dr Johnson's, XII 801.

Ossification, II 829-of the human skull, III. 28 See Bones. Ossoli (S Margaret Fuller), XVII. 7 Ossory, see of, XIII 84. OSTADE (Adman Van), XVII. 8, 75.

— (Isaac van), XVII 8 OSTASHKOV, in Russia, XVII. 8.
Ostell (M1), his photographic process. XVII 548

OSTEND, XVII 8-siege of, XI. 572. Osteogeneiosus, genus of fishes, XII. 262. Osteoglossum, genus of fishes, XII, 249, OSTROLOGY, XVII 9-human, III 4-of the lower animals, 74; XXI. 557—of fishes, XII. 207 See Bones Osteolopis, genus of fossil fishes, XII. 334;

XVII. 123 Osteoplax, genus of fossil fishes, XVII. 125. Osterode, in Hanover, XVII. 9.

OSTLEVALD (Jean Fiederic), Protestant divine, XVII. 9. Ostia, Italian city, XVII 9. Ostian road, XIX 228.

Ostracian, genus of fishes, XII. 313-fossil. Ostracionidæ, family of fishes, XII. 313;

XVII. 122. OSTRACISM, XVII. 9; IV. 199, n. 2, 399; XVIII 565.

Ostracoda, fossils, XVII. 101.

Ostrea, genus of mollusks, XV. 346-fossil, XVII. 105.

Ostreadæ, family of mollusks, XV. 348fossil, XVII 105.

Ostrich, XVI 796; XVIL 634-African, II 217; XVI. 270-in Arabia, III 347 -American, XVI. 796-tume ostriches, IX 528-erroneous accounts of, by ancient authors, III. 361-respiration of, XVIII. 75. Ostroo, in Russia, XVII. 10.

OSTROGOSITSK, in Russia, XVII 10. Ostrogoths, X. 727, 728. OSTROWO, town in Prussia, XVII, 10. OSTUNI, town of Naples, XVII. 11. OSUNA, town of Spain, XVII. 11. Oswrgo, town in United States, XVII. 11. Oswell (Mr), African traveller, II. 211. OSWESTRY, town in Shropshire, XVII. 11. Osymandas, his library, XIII. 381. Osymandias, circle of, I. 616. Orago, XVII. 11; XVI. 235—Free Church colony at, VII. 150.

OTAHEITE, XVII. 11. See Tahiti. Otaria, genus of manunalia, XIV. 172dentition of, XVI. 463.

Otchakoff, Charles XII. at. XX 854. OTHMAN (Ibn Affan), caliph, XVII. 11. - or Osman, founder of the Ottoman

empire, XVII. II. See Osman. Orno (M. Salvius), Roman emperor, XVII. 12; XIX. 338. or Otto L, the Great, XVII. 12; XIL 644.

- or Otto II., XVII. 12; XII. 644. - or Otto III., XVII. 12; XII. 644.

## OTH-OVA

Отно or Otto IV, XVII 12 —— or Otto, of Freyisngen, chronicler, XVII 12

- king of Greece, XI 30, 31 Otilopha, genus of reptiles, XIX 81. Otiocerus, genus of insects, IX. 169. Otis, genus of birds, XVI 797. OTLEY, in Yorkshire, XVII 13 Otodus, genus of fossil fishes, XII 341. Otolithus, genus of fishes, XII, 285. Otomi language, XIII 221. OTRANTO, XVII 13, XIL 185, XX. 212, 255

Ottadini, Caledonian tribe, VI 73, XIX.

OTTAJANO, Neapolitan town, XVII 13 

Otter, XIV 159-its teeth, XVI. 461-fur, X 348-sen-often, ib.

- hound, XII 41-hunting, 40. OTTLEY (William Young), XVII. 13—his history of engraving, XVIII. 522, 521 et sea.

Otto, his obligations to Cunningham, VII. 586

(M), on the decrease of the Bultie, IV 403.

- of 10ses. See Attan Ottocat, IV 302, 310. Ottoman army, III 656. See Turkey Ottomans, IX 389.

Ottomaques, clay eaten by the, II 693. Ottrelite, mineral, XV. 78. Otumba, in Mexico, XIV. 723-battle of. 705.

Otus, genus of birds, XVI. 716. OTWAY (Thomas), tragic poet, XVII. 13; XXI. 171, 173—dramatic works of. VIII 161.

- (Cæsar), on the linen trade of Ircland, XII, 520 Ouaran, reptile, XIX 28.

Oubliettes, XVIII. 566 Outpe, or Oudh, Indian province, XVII.

14; XI. 500 et seq

Nabob of, XI. 500 et seq

Oudenarde, battle of, V. 451; IX. 369. Oudenodon, fossil reptiles, XVII. 142 Outmor (General), occupation of Rome by, XII. 659

(Nicolas - Charles), marshul of France, XVII 23; X. 139 et seq, 159. Oudney (Dr), African fraveller, 11, 210; VI, 752.

Oughter (Lough), VI. 347 Oughterard, in Galway, X. 390. OUGHTRED (William), mathematician, XVII. 23—on nigebra, II. 486. Qualitica, town in Russia, XVII. 24. Oulsilile, monkeys, XIV. 141.

OUNDLE, in Northampton, XVII. 24. Oursl, or Ooral Mountains. See Ural Mountains. Ourax, genus of birds, XVI, 785. Oung, or Orga, town of Mongolia, XVII. 24 Ourique, battle of, XVIII, 380,

Ouno Pasto, town in Brazil, XVII 24. OURE, GREAT, XVII. 24; V. 721; VI. 114; XII. 48; XVI. 280. - LITTLE, XVII. 24: XVI. 289.

- river, in Sussex, XX, 839, river, in Yorkshire, XVII 24. Outerop of beds, in geology, AV. 168. OUTLAW, XVII. 24.
Outlam (General), XVI. 307, 308, 311, 315

-his Persian campaign, XVII. 443. Outworks, in fortification, IX. 822. Ouverture (Toussaint d'), XI. 250. Ouzel, bird, XVI, 754.

Ova, of fishes, number in the cod, XII. 268 - hatching of salmon, IX. 500; XII. 138, 139—estimate of number de-posited in the Tweed, 616—of the herring, 235—of Batrachian raptiles, XIX. 74—mollusks, XV, 331, 334—changes in, after feeundation, XVII. 684.

Ovalo, in Sardinia, XVII. 24. Ovalo, III. 468, 476, 511. OVAR, Portuguese town, XVII. 24. Ovary, III. 70; XVII. 682 - of flowers, V. 118, 130.

# OVA-OXA

OVATION, XVII 24; XXL 354. OVERALL (John), bishop, XVII 25 OVERBURG (Sir Thomas), XVII. 25, VII. 96.

Overfalls, flow of water over, XII. 121, 126, 127.

OVERFLAKKEE, island, XVII. 26. Overreach, in horses, XXI 562 Overseers for the poor-laws, XVIII 297. Overshot water-wheels, XII 167

Overstone (Lord), on joint-stock banks, XV 448—his evidence on banking, 450 n 462, n. 2, 470 n —on limited liability, XVII. 316—on free trade, XXI. 62

OVERTON, in Flint, XVII 26.

OVERTOR, IN FUND, AVII 26.

OVERTORE, IN MUSIC, XVII 26.

OVERWEY (Dr), his discoveries in Africa,
X. 478, II. 211—death, 479—his exploration of Lake Tchad, XXI 80

OVERYSSEL, IN Holland, XVII 26, XI

Ovidius Naso (Publius), XVII 26—Bur-man's edition of, V. 788—poetry of, XVIII. 105-his description of chaos, VI 415.

OVILDO, Spanish province and city, XVII. 28, 29; IV. 156-university of, XXI. 492

- Y VALDEZ (G. Fernandez de), XVII.

30. Oviparous animals, II 772 Ovis, genus of mammalia, XIV 212. e, in botany, V 118, 133 Ovulites, fossil shells, XVII 93, 94. Ovulum, genus of mollusks, XV. 384. Ovum See Ova, Eggs

Owen (Dr), on the geology of Indiana, XII. 514—of Iowa, 459, 460.

(JOHN), Puritan divine, XVII. 30-on theology, XXI. 197, 213 et seq. (JOHN), epigrammatist, XVII. 33. (Prof. Richard), on animalcules, III. 107—on the vertebrate skeleton, XII. 205—on the osteology of fishes, 208, 209—names given by him to the different parts of the skeleton of fishes, 210, n—on ichthyology, 219 et seq—his odontography, 332; XVI 408—on the structure of teeth, 407 and n 4 et seq -on the pearly nautilus, XV. 357, on the vertebral structure of the skull, XVI 501—on the mollusca, XV 319 et seq.-on a fossil reptile, XVII -on the fossil animals of Australia, 638-on the distribution of fossil elephants, ib .- on the more speedy extinction of large than of small animals, 639 - his classification of mammalia

zoophytes, 981—on wool, 905.

— (Robert), communist, VII. 214—
his observations on the effect of the manufacturing system, 215-his paral-lelogram at O. beston, 216-his Book of the New Moral World, 1b -his manufactory at New Lanark, XIII. 174.

founded on the bram, XXI. 31-on

- (WILLIAM), portrait-painter, XVII

Owhyhee, discovery of, by Captain Cook, VII. 340—his death there, ib. Owls, XVI. 746.

Owsjannikow on the spinal marrow, XVII Ox, XIV. 215; XVII. 632-ox-labour in

agriculture, II. 341—Galla ox, 55—flesh of, as food, IX. 761—scriptural meaning of the term oxen, II. 249-times of appearance of the permanent teeth in, XVL 468—chemical composition of the teeth, 418-fat of, 493-oil from the bones of the feet of, ib. See Bos. Ox-bot, XXI. 569. See Œstrus

Oxæa, genus of insects, IX. 200. Oxalate of lime, its pyro-electricity, VIII.

Oxahe acid, VI. 511, 515—a poison, XIV. 435—used for discharging colours, VIII. 316—antidotes to its poisonous effects, XVIII. 134.

Oxalidacese, nat. order of plants, V. 187. Oxalis roots, culture of, XI. 740. Oxalite, mineral, XV. 125. Oxamic acid, VI. 512.

#### OXE-OZE

OXENSTIERNA (Count Axel), XVII. 33; Oxenstjerna (J. Gabriel), Swedish author,

XIX 698

Oxford, XVII. 34-Oxford marbles, III 720—libraries at, XIII 395—university of, VIII. 745, XXI. 443, 452, 462; colleges and halls, 459; roof of the theatre at, XIX 386; servitors at, XX. 312; examinations, IX. 924—Radcliffe observatory at, III. 817-meteorological observations at, XIV. 688—early printing at, XVIII 534, 538—societies in, XV. 368.

clay, XV 208 - EARL OF, XVII 36 See Harley - or middle oolite, XV 206, 208.

Oxfordsines, XVII 38—population and value of property, VIII 754, Oxidation, XVII 37—of metals by electricity, VIII 593
Oxide, XVII. 37; VI. 483—antimony, 494—bismuth, 496—copper, 497—metals. cury, 498—silver, 1b—platinum, 499—iron, 489; cause of decay in stones, XX. 712—lead, VI. 497—manganese, 490—molybdenum, 494—tungsten, ib—titanum, ib.—tellurium, 495—zınc, 491—tin, 493—vanadıum, 494—uranıum,

496. See Chemistry.
Oxidized non ores, XV 107 - stones, XV. 68 Oxium, tribe of insects, IX. 193.

Oxley (Mr), his discoveries in Australia, IV 254, 255 Oxlip, plant, V 203,

Oxna, one of the Shetland Islands, XX.

Oxus, river, XVIL 37; III. 753; V. 758, XIX 549.

Oxybelus, genus of insects, IX. 196.

Oxycera, genus of insects, IX. 237.
Oxycera, XVII. 37; VI 455—the most important of the elementary bodies, 438—a component part of the atmosphere, IV. 180; VI 464; XIX. 608—specific gravity of, IV. 181, VI 448; XII. 89 -its use with hydrogen in the blow-pipe, IV. 794—effects of food containing, VIII. 24—in plants, II. 375; V. 95—its absorption by flowers, 148—combined with hydrogen, VI 458—attraction of metals for, 483—its functions in the animal economy, 522binary compounds of minerals with, XV 61—combination of the non-metallic elements of minerals with, 64 as an element in the crust of the globe, XVII 618-magnetism of, I 981-consumed by respiration, XVII 662cessary to combustion, XX. 353-in the combustion of coal, 629

Oxyhydrogen microscope, XIV. 789, 793. Oxylus, VIII. 634 Oxymel process in photography, XVII.

Oxymuriate of potash, gunpowder from, XI 158. See Chlorate of Potash. Oxymuriatic acid, or chlorine, IV. 758. See Chlorine.

Oxyopus, genus of arachnides, III. 382 Oxyporus, genus of insects, IX 103. Oxypterus, genus of mammalia, XIV

Oxyrhina, genus of fishes, XII. 324, 322 fossil, 341.

Oxyrhynchus, genus of birds, XVI. 763. Oxystomus, genus of fishes, XII. 229. Oxytelus, genus of insects, IX. 103. Oxyurus, zoophytes, XXI. 981. OXER and TERMINER, XVII. 37.

Oyes, III. 322.

Oyster, XV 348, 345; IX. 765—pearloyster, XV. 348; of Ceylon, VI 395— hammer-oyster, XV 348—tree-oyster, 345—Essex oyster-fishery, IX. 336 fossil, XVII. 106, 105—Burren oyster-bed, in Clare, VI. 755

Oyster-catcher, bird, XVI 797. OZANAM (Jacques), mathematician, XVII. 37—on dialling, VII. 776.
Ozark Mountains, II. 675; XXI. 420.
OZELL (John), XVII. 37.

## OZE—PAG

OZEROV (V. Alexandrovitch), tragic poet, XVIL 37 OZIERI, town in Sardinia, XVII. 37. Ozokerite, mineral, XV 124. Ozone, VI 461, VIII 536, XIX 608. Ozorius, genus of insects, IX 104 Ozorkov, town in Poland, XVII. 87.

# P

P, letter of the alphabet, XVII. 38-in abbreviations, II 20 Paamyles, XI. 385

Pacaraima (Sieria), in South America, XVII 38.

Pacas, in zoology, XIV. 189. PACCA (Bartolomeo), cardinal, XVII 38 Paccard (Dr), his ascent of Mont Blanc II 627

PACCHIAROTTO (Jacopo), painter, XVII

PACE, Roman measure, XVII. 38 PACHECO (Francisco), painter, XVII 38—teacher and father-in-law of Velasquez, XXI 533.

PACHETE, in British India, XVII 39. PACHOMIUS, XVII 39; XV 407 Pachycormus, genus of fossil fishes, XII 335; XVII. 126 Pachydermata, XIV. 194, 196, 135, II.

774; their bones, III. 78 et seq organs of smell, 94—dentition, 32, 33, XVI 467 et seq —muscles, III. 91—oily products of, XVI. 493—of Africa, II 217— America, 713—distribution of, XVII 631 Pachygaster, genus of insects, IX 237. Pachygyra, fossil coials, XVII. 97. Pachyptila, genus of birds, XVI. 812. Pachypus, genus of insects, IX 123.

Pachyrisma, fossil mollusks, XVII 107 Pachysona, genus of mammalia, XIV 148
Paciero Oczan, XVII 39, 575, 576—temperature of, 577—equatorial currents of, 579—tales of, 581

Pacini (Philip), II. 816, 817. Pacinian corpuscula, II. 816. PACIOLI or Paciolus (Lucas), on algebra,

XVII. 40; II. 484, X 504 Pack of fox-hounds, XII. 39, 43kept by Edward I, 34—expense of keeping, 38—number of, in United Kingdom, 39—pack of harriers, 42.

Pack-horse, XI 656.

Packet system of postage, XVIII. 409—of United States, 427
PACTOLUS, river, XVII. 40, XIV. 807.
Pacurianus, VIII 317.
PACUVIUS (Marcus), Roman dramatist, XVIII 437. XVII. 40.

Padang, in Sumatra, XVII. 41-filigree work of, IX. 579.

PADDINGTON, XVII 41; XIII 664
Paddle-wheels, XX. 636, 656—slip of, 657
—compared with the screw, 661. Paddock, XI 670.

PADERBORN, in Rhenish Prussia, XVII 41 Padinam, in Lancashire, XVII 41. Padilla (Juan Lopez de), XVII 41 - (DONA MARIA PACHECO DE), XVII

PADRON, town in Spain, XVII 42. Padstow, town in Cornwall, XVII. 42.
Padua, XVII 42—Academy of Sciences at, II 63—meteorological observations at, XIV. 670—violin school of, XXI. 29

—university, 492 PADULA, town in Naples, XVII. 43. Padus, XVII. 43. See Po. P.EAN, XVII. 43.

Pæcilopoda division of crustacea, VII. 543 Pæciloptera, genus of insects, IX. 169. Pæderus, genus of insects, IX. 108. Pædo-baptists, XVII 43.

Pæonians, XIII. 763, 764 PAESTUM, XVII. 43, XV. 782; XX. 287—temples of, VI. 68.

PAEZ (Pedro), Spanish missionary, XVII 43. - (General), IV. 818-820.

PAGAN (Blaise-Francois Comte de), XVII. 43-on fortification, IX. 814.

## PAG-PAL

Paganalia, XVII. 44.

PAGANISH (Nicolo), violinist, XVII 43.

PAGANISH, XVII. 44, I. 456 et seq., Xil.

357—mixed with Christianity by the church of Rome, III. 311 n. 2, 314discouragement of, in the Roman empire, XIX 353, 364—its alleged tolerant spirit disputed, XX 380.

Pagans, meaning of the word, I 456character of their gods, 458-their use of images and pictures a cause of mul-tiplying their gods, 465—their miracles, 466.

Page, in chivalry, VI 612

commander, his survey of the river Paraguay, XVII. 603 (David), XVII 121

(Mr), his mode of getting in the piers of the new bridge at Westminster, XX 723—his method of protecting the surface of stone, 735 Pagellus, genus of fishes, XII. 287-fossil,

Paggi (G Battista), XVII. 44.

Pagninus (Sanctes), XVII. 44. Pago, island, XVII 44 PAGODA, XVII 44, III 459; XIII. 15; XV. 774

Coin, XVII. 44, XV 422. Pagrus, genus of fishes, XII. 287. Pagurus, genus of crustacea, VII 542. Pahang, in the Malay peninsula, XVII. 44.

Pahlavi, III 747 PAHLUNPORE, in India, XVII 45 PAIMBŒUF, town in Flance, XVII 45. Pain, insensibility of insects to, III. 177 PAINE (Thomas), XVII 45, X 71—his work entitled Common Sense, V 537 his Rights of Man, 543, XIII 786.

Paingeon, blind mathematician, IV. 778 Paington, town in Devon, XVII 45. PAINSWICK, town in Gloucestershire, XVII.

Painter's work in building, V. 757. - colic, XIV. 434.

Painters, in Denmark, XIX. 696; Sweden,

702. See Painting

702. See Faining
Fanting, XVII 46—ancient, XI 345;
III 707, 708—Chinese, VI 581—Dutch
school of, III. 710, XI 591—ancient
Egyptian, VIII 442—in Hindustan, XI.
477—academies of, at Paris, II. 67,
Rome, Turin, Milan, Floience, Modena, Madrid, and Stockholm, 68; Edinburgh, VIII 397, London, XIII. 675-Amelican custom of painting the skin, II 682—colours used in, VII. 152—design in, 758—painting in enamel, VIII. 654 -encaustic painting, ib -fresco, X. 306 -mosaic imitation of, XV. 658-miniature, 249—painted glass, X. 667—in Persia, XVII. 429—painting on porcelain, XVIII. 444—qualities common to painting and poetry, 92—house painting, V. 757. See Fine Arts

Paintings, private collections of, in Britain, XVII. 86—prices recently paid for, ib —hst of Sir J. Reynolds' historical, XIX. 101, n.

Pairing of animals, III 181, 182 Paisbergite, mineral, XV. 82.

PAISIELLO (Glovann), XVII. 87.

PAISIELT, XVII. 87—textale fancy goods first made at, VII. 449—cotton, woollen, and silk manufacture, XIX. 805. Paixhans (Col), his guns, XI 139.

PAJOU (Augustin), French sculptor, XVII. 90.

PAR PATTAN, town in India, XVII. 90. Paks, town in Hungary, XVII. 90 Palaces, in ancient Rome, III. 470-mo-dern Rome, XIX 369-in London, XIII. 668, 669—palatial architecture of the Italians, III 451—in Petersburg, XVII 491-Vienna, XXI. 583, 585.

Paladium, XV. 113. Palæaster, fossil star-fish, XVII. 99. Palæchinus, fossil echinoidea, XVII. 99. PALÆOGRAPHY, XVII. 90; III. 422.

Pal. zologus, name of Byzantine mo-narchs, XVII. 90; VII. 816, 818. Palæoniscus, genus of fossil fishes, XII. 384; XVII 125.

# PAL-PAL

PALÆONTOLOGY, of animals, XVII 91, 687, XV 128, 129, 194; XII 332—in South America, II. 670, XVII 609—Brazil, V 293—Siberia, XII 664—Isle of Man, XIV. 244 polar regions, XVIII 180-Russia, XIX 517—Scotland, 791, 798—crustacea, VII 540—forammifera, XXI 1007, XVII 98—of plants, V 232; XVII 640.

Palæophis, fossil serpents, XVII. 153. Palæophrynos, fossil batrachia, XVII. 152 Palæophytology, V. 232 Palæorhynchum, fossil fishes, XII 346. Palæornis, genus of birds, XVI 781 Palæosaurus, fossil reptiles, XVII 141 Palæospongia, fossil sponges, XVII 92 Palæotherium, XVII 163, XVI 125-teeth of, 465.

Palæozoic epoch, in geology, XV. 195, 196, XVII. 92, 587—rocks, in Germany, X. 584—fossils, XVII 96 et seq—rocks of Scotland, XIX. 790-Spain, XX. 484

Palæozoology, V 232. Palæphatus, XIX 827 PALÆSTRA, XVII 176, XI 168. Palætyrus, city of, XXI 404 PALAFOX-Y-MELZI (Don José), Spanish patriot, XVII 176 Palagonite, mineral, XV. 73.

Palais (Le), town in France, XVII 177. PALAMAS (Giegorius), XVII 177. Palamedea, genus of birds, XVI. 806. Palamow, in Bengal, XVII 177. Palapteryx, fossil birds, XVII 155 Palarus, genus of insects, IX 195 Palate, bones of, III. 23-muscles, 39-

soft palate, 48
PALATINATE, XVII 177, IV 518.
Palatine hill, XIX 356, 357. Palawan, island, XVII 177 PALAZZUOLO, town in Sicily, XVII. 177. Pale, in hetaldry, XI 327.
Palea, in botany, V. 125, 215
Palemang, in Sumatra, XVII. 177, XX.
803, 806—tin found near, 804

PALENCIA, in Spain, XVII 178
Palenque, ruins of, II 697, XIV 719, 721

PALERMO, XVII 178; XX 243, 255—mortality in, XV. 625—commotions at, in 1848, XII. 657—university of, XXI. 492 Paleryx, fossil serpent, XVII. 153.

Pales, Roman divinity, XVII. 179. PALESTINE, XVII. 180; XX. 901, 905— Saladin's conquests in, VIII 480— climate of, XX. 906, 907—inhabitants, 907-religious sects, ib., et seg. Map of, XVII. Pl. See Canaan, Crusades, &c Palestrina (G Piciluigi da), musician, XVII 198.

town in the Papal States, XVII. 199; XVIII. 448. Palette water-wheel XII 183

Paley (William), DD, AVII. 199—on Tucker's writings, I 114, n.—disputed the existence of a moral faculty, 225 and n-followed the opinions of Bishop Law, 226, n -his analysis of virtue, 301 -on the nature of our pleasures, 303, 304-his Moral Philosophy, 307, 389; copyright of, VII 356—on the moral sense, I 314—one of the brightest ornaments of the English Church in the eighteenth century, 388—did not owe his system to Hume, ib—fitter for business than philosophy, ib.-his genius and political bent, ib—his style, ib.—his works, ib—on virtue, 390; happiness, ib --erroneous views on honour, his political and ecclesiastical views, 392—on instinct, 225—on divorce, VIII. 67—on the character of reformers, IX. 321, n. 3—his Natural Theology partly plagiarised, XVI. 268—on the credibility of miracles, XV. 264—on rights, XIX. 172, 173-on the noxious nature of tithes, XXI. 64—on different kinds of occupation, 674.

Palfyn on anatomy, II. 766. Palgrave (Sir F.), on the Anglo-Saxon militia, XV. 6, 7—on Ingulphus' History of the Monastery of Crowland,

#### PAL-PAL

XII. 381-on the rapes of Sussex, XX. Pâli language, study of, XVII 530

Paliano, town in the Papal States, XVII 206

Palikars of Greece, XI 14. Palimphyes, genus of fossil fishes, XII. 345.

Palimpsests, XVII. 207; IV. 705—Cicero de Republica, VI. 721—Mai's discoveries in, XIV. 95, 96—discovery of parts of the Theodosian Code, VI. 744—Parisian, or Codex Ephraimi, XIX. 838.

Palindromus, XVII 215
Palingenesis of plants, III. 313. PALINODE, XVII. 216. Palinuro, XX. 241.

Palinurus, XVII 216—genus of fishes, XII. 297.

-vulgarıs, VII 542 Palisades, in fortification, IX. 798 et seq Palisot (Baron de Beauvois), his work on insects, IX. 11-on lattlesnakes, XIX.

Palissy (Bernard), XVII. 216; XVIII 432—his ware, ib.

Palla, ancient robe, XVII 219. Palladio (Andrea), XVII 216-his architeetural publications and works, III.
451, 452—his designs of the orders of architecture, 478.

PALLADIUM, statue, XVII 217.

a metal, XVII 217, 622, VI 499 -specific gravity of, XIL 88-native,

PALLADIUS, Greek medical writer, XVII

bishop, XVII. 217—his mission to Ireland, XII. 465.

(R. T ÆMILIANUS), XVII. 217.

XVI. 728—on the Deluge, VII 722—philology advanced by, XVII 528—planet, IV 67—discovery of, 68,

III ś08. Pallavieno (Cardinal), his History of the

Council of Trent, I 437 - (FERRANTE), XVII 219. an irrigator of land, XII. 622.
PALLEE, town in India, XVII. 219.
Pallets of clocks, VII 7 et seq.

Palliser (Sir Hugh), IV. 419; V. 485-his dispute with Keppel, 486
Pallium, robe, XVII 219, 220.

PALM, XVII. 220-structure of the stem, V. 83 - mode of growth, 84 - region where palms predominate, 223 - date. 213-fan, ib.-dwarf fan, 214-ivory, ib. —sago, ib—in Palestine, XVII. 190—Palmyra palm, in Coylon, VI 394—distribution of palms, XVII. 626 et seq.; V. 228-silicified trunks of, 641-an

emblem of victory, 220.

OIL, XVII 220; XVI. 494—tree yielding, II. 226-trade, in Guinea, XI 89.

Palm-house at Kew, XIII, 75 PALM-SUNDAY, XVII. 220

Palmæ, or Palm, order of plants, V. 213. Palma Christi, VI. 328—new silkworm fed on, in Jamaica, XII. 681.

(GIACOPO), the Old, painter, XVII. 220.

(Gracoro), the Young, painter, XVII. 220 island, VI 166; volcano in, XXL

605 town in Majorca, XIV. 102.

town of Naples, XVII. 220. town in Spain, XVII. 220 town of Sicily, XVII. 220; XX. 245. PALMAS (las), town in Grand Canary, XVII. 221; VL 166

(Cape), Maryland colony on, XIII. 360.

Palmblad, Swedish author, XIX. 700. Palmer (F.), convicted of sedition, V. 550.

(John), his mail-coach system of conveying letters, XVIII. 407—increase

of revenue from, 408.

on liturgies, XIII. 516.

## PAL-PAN

Palmer (Mr), engravings copied by, XXI 636.

worm, as bart, III. 155. Palmerston (Lord), dismissal from the Foreign Office, V 672—his remonstrance against the extinction of Ciacow, VII. 475-his negotiations with France on the Eastern question, X 215-his letter to Lord Normanby, 226—Sir Robert Peel's opposition to his foreign policy, XVII 365

PALMI, town of Naples, XVII 221. Palmieri (M), on the electricity of clouds,

Palmipedes, order of birds, XVI. 808. PALMUS, a measure, XVII 221
PALMUS, A measure, XVII 221; VII 186; XX 904, 910—runs of, III 470—conquered by Aurelian, XIX 349

genus of annelides, XI, 299. palm, in Ceylon, VI. 394 Palmyrene, Syrian province, XX. 904. PALO, town of Naples, XVII 223. Palolo, species of annelide, XI. 297. PALOMAR (San Andres de), town in Spain, XVII 223.

PALOMINO DE CASTRO Y VELASCO (A Antomo), XVII 223 Palos, town in Spain, XVII. 221

PALOTA, town in Hungary, XVII 224. Palpatores, tribe of insects, IX. 112. Palpicornes, family of insects, IX. 116 Palpimanus, genus of arachmides, III. 383 Palsy, in the domestic animals, XXI 575 See Paralysis.

PALU, town in Turkey, XVII. 224. PALUDAMENTUM, XVII. 224. Paludicellea, zoophytes, XXI 1001 Paludina, genus of mollusks, XV. 382-fossil, XVII. 110.

Paludinidæ, family of mollusks, XV 382 Pamborus, genus of insects, IA 96.
Pambour (M de), on the theory of locomotives, I 886

PAMIERS, town in Flance, XVII. 224. PAMIR, in Asia, XVII 224 Pampa tribes, in ethnology, IX. 319. Pampas of South America, AVII 221, 608 II. 668; III. 129-of La Plata, XVII. 776.

- BEL SACRAMENTO, in Peru, XVII 224. Pamphilia, silk first woven by, XX. 286.

PAMPHILUS, XVII. 224.
painter, XVII. 221, 54 genus of insects, IX. 184.

Pamphlets, XVI. 181. Pamphractus, genus of fossil fishes, XII.

PAMPHYLIA, XVII. 224—coins of, XVI. 377. Pamplona, city in Spain, XVII. 225; XV. 831, 832

OSJ, 602 PAN, heathen god, XVII 225, I. 458-grotio of, IV. 169. (Mallet du), XVI 197. PANANUS, Greek painter, XVII. 226, 53. PANATUS, Stoic, XVII. 226.

Panageus, genus of insects, IX. 94. Panama, town in New Granada, XVIL 226; X. 796, 797.

taken by the bucaneers, V. 711-pearls from, XVII 357.

LSTIBUS OF, XVII. 226—proposed canal across, II. 711
PANAON, Island, XVII. 226.
Panaila, island, XIII. 502. Panathen. A., festival, XVII. 226. Panaulon, XVII. 227. PANAY, island, XVII, 227. Panchax, genus of fishes, XII. 253. Panchperce, Indian tribe, IV. 525. Panckoucke (M.), French journalist, XVI.

PANCRAS (St), parish of, XVII. 227. Pancratium, athletic game, XVII. 227. Pancreas, anatomy of the, III. 62. Pancreatic juice, II. 782; VI. 523; XVII. 660.

PANCSOVA, town in Austria, XVII. 227. Pandanacem, nat. order of plants, V. 214. Pawdects, XVII. 227; VI. 746; XIII. 28, 272—story of their discovery at Amalfi, IL 647; VL 747—Cunningham's meditated edition of the, VII. 586.

# PAN-PAP

Pandects, translations of Greek medical works, XIV. 456.

Pander (Dr C H), on fossil fishes, XVII 115.

Pandion, genus of birds, XVI 742. PANDORA, XVII 227 - genus of mollusks, XV. 350-fossil,

XVII. 108. PANEEPUT, in India, XVII 227. Panegyric, XVII. 227 — panegyrical periods, VIII. 451—royal, 452.

Paneiconography, XVIII. 555 Panel, XVII. 228—in architecture, III. 511—in joinery, V 751; XII. 810. Paugasius, genus of fishes, XII 262. Pangolin, in zoology, XVI 192, XVII.

638. Pangonia, genus of insects, IX. 231 Paniany, Indian town, XI. 493.

Panie. See Pan Paniele, in botany, V 115 Pânını, Sanscut grammarlan, XVII 519 l'ANIONIA, festival, XVII 228 Panizzi (M1), on the British Museum, XIII.

391, 393 PANMELODICON, XVII. 228. Pannartz, carly printer, XVIII 592. Pannini (G. Paolo), painter, XVII 228. Panniput, battle of, XI. 481.

Pannonia, XVII 228. Panopæa, genus of mollusks, XV. 350-fossil, XVII 108.

PANORAMA, AVII. 228. PANORMUS, XVII. 229, 178. l'anorpa, genus of insects, IX. 178. Panorpata, insects, IX 177. Pansy, V 93.

PANTALONE, musical instrument, XVIL

PANTULLARIA, island, XVII. 229; XX. 246

PANTUEISM, XVII 229; XXI 185-pautheistic hypothesis on the origin of evil, IX 421—of Pythagoras, XVIII. 711—Spinoza, XX. 515. PANTILON of Rome, XVII. 238; XIX. 360

et seq.—its architecture, III. 469, 470.
——in Paris, XVII. 282.
Panther, XIV 169. PANTICAPEUM, XVII. 208; XIII, 75.
PANTICAPEUM, XVII. 238; VI. 119.
PANTOMIME, XVII. 238—uso of, as the native language of the deaf and dumb, VII. 677, 679-among the Romans, IV.

Panuco, town in Mexico, XVII. 289. Panugus, genus of insects, IX. 199.
Panvinio (Onufrio), antiquary, XVII, 209.
Panzer (G. W F.), his entomological works, IX. 10.

(S W.), on early printed books,

PAOLA, town of Naples, XVII. 289.
PAOLI (Pasquale), XVII. 289—Boswell's visit to, V. 63.

- (CLEMENS), XVII. 240. Paolo Venonese, XVII. 240; VI. 59; III. 710—character of his paintings, XVII. 71. See Cagliart. Paou, island, XVII. 240.

- Egyptian king, VIII. 455. PAPA, town in Hungary, XVII 240. PAPAL STATES, XVII. 240—weights and measures, XXI, 812

schismatic churches, in Syria, XX.

- orders of knighthood, XIII. 122 Papaveracee, nat. order of plants, V. 182. Papaw tree, V. 193; XVII. 628. Papayacea, nat. order of plants, V. 193.

Papengucea, int. order of plants, V. 195.
Papengucea, in Hanover, XVII. 245.
Papeng XVII. 246—of books, IV. 705—mode of whitening and cleaning, 771—ancient, VIII. 42—for drawing, 174—filtering, IX. 583—for writing on, with coloniess ink, XII. 383—Japanea, 694—bleaching of rags for, IV. 770—kind used by the early Mentz printers, XVIIL 530; Scotland, XIX. 806—manufacture of, in England, VIII. 781, n. 1; France, X. 256; Holland, XI. 583; near Edinburgh, VIII. 409—first paper-mill in England, XIII. 110—for photographic

# PAP—PAR

purposes, XVII. 552-leaves of the Talipat palm used for, XXI. 8-excise duties on, 59. See Papyrus.
Paper-money, XVII 261. See Money

PAPHLAGONIA, XVII. 261-coins of, XVI.

Parhos, ancient cities, XVII 261.
Parias, ancient bishop, XVII 261—on the Gospel of St Matthew, XIV 356

Papier mache, XVII. 261—trade in, at Birmingham, IV. 782—japanning of, XII 699.

Papilio, genus of insects, IX. 207 Papilionaceous plants, V 124, 190 Papillæ, II. 816—of the tongue, in man, III. 49; in the lower animals, 100 Papillon (John Michael), wood-engraver,

XXI, 904. Papillone, in heraldry, XI. 330. Papin (Dr), on transmission of force through air in pipes, XVIII. 61.

\_\_\_\_ (Denys), his digestor, I. 770—his steam-engine, XX. 574, 577—his suggestion of steam navigation, 636 Papineau, Canadian agitator, V 665 Papinianus (Æmilius), jurist, XVII 262

Papists. See Pope, Popery, Roman Catho-lics, Roman Catholic Church, Roman Catholigism

Papous, II. 776. Pappal, in Borneo, V 47

Pappenheim (General), XX. 849, 850, 851 Pappus of Alexandria, XVII, 262, X, 502his solution of the trisection of an aic, III 145-on the works and character of Apollonius, 300 — parts of Apollonius preserved by, VII. 250 — MSS of his works, X 502—on porisms, XVIII. 360. Papremis, battle of, VIII 466.

Papua, or New Gunea, XVII. 262; IV. 262, 263—Papous, or Papuans, II 776— degraded state of the aborigmes, I.

PAPYRUS, XVII. 262; VIII. 431. 441; II. 216; XVI. 270 — paper made from, XVII. 246—papyri found at Herculaneum, VII 672; XI 345; XV. 781-Gnostic papyrus of Leyden, XI 377-Marini on ancient papyri, XIV 305palimpsests of, XVIL 207.

Par of exchange, IX. 481.
PARA, province, XVII. 266; V. 295.
(Rio da), XVII 603

southern arm of the Amazon, XVII. 266.

town in Brazil, XVII 265.

Parable, XVII. 266. Parabola, VII. 252; X. 544, 552—mensuration of, XIV. 519—parabolic theory of gunnery, XI 116—its use in masonry, XX. 726-how to describe a, ib.

Parabolic-trumpet, XXI. 861 Paraboloid, X. 559-mensuration of, XIV 520 - paraboloidal mirrors, XIII, 468,

PARACELSUS (P. A T.), XVII. 266; XIV. 460—character of, I 18—his application of chemistry to pharmacy, 570—on demons, III. 309, n—his use of the magnet in curing disease, XX. 414

Paracentisis, in animals, XXI. 573.

Parachute, IL 179-theory of, 180.

Paradas in fencing, IX 503.

Paradas (Mie.), IV. 781—Mesmer's trentment of her case, XX 417, XIV. 547.

PARADISS, XVII. 287; XXI. 194—Mohammedan, XV. 303.

See Eden.

- birds of, XVI. 765; IV. 264; XVII. 683.

Paradisea, genus of birds, XVI. 765. PARADOX, XVII. 267.

Paradoxurus, genus of mammalia, XIV.

PARAFFINE, XVII. 267, 359; VI. 506, 511; VII. 473, 506; X. 434. Paragenesis of minerals, XV. 130, n. Paragonite, mineral, XV. 78. Paragreles, VIII. 586

of, 691-complexion of the natives, 694

-means adopted by the Jesuits to im-

Paragua, island, XVII. 177.
Paraguana, in Venezuela, XVII. 267. PARAGUAY, XVII. 267, IL 704-Indians PAR-PAR

prove them, 691, 692—Jesuits m, XII 755—tea, IV. 827, V 199; XVII 629 See Maté.

PARAGUAY RIVER, XVII. 269, 603, 782; II 673

Paragus, genus of insects, IX. 239 PARAHIBA, Palaiba, or Parnahyba do Norte, in Brazil, XVII. 269; XIX. 174-population, V. 295

- river in Brazil, XVII 269. PARAHIBA-DO-SUL, Brazilian river, XVII

Paralepis, genus of fishes, XII 248.

Parallax, XVII. 269; II. 36—explanation of, IV. 7, 8—solar, 20; I. 787 lunar, ib; IV. 33, 130-of stars, I 841, 864; IV 81, 96-planets, 62-Mars, 1b -mode of computing, 115, 116, 117.

Parallel, XVII 269-lines, X 512, 532

-how to draw them, 526 - motion of steam-engine, XX. 591

et sea PARALLELOGRAM, XVII. 267; X 508, 513, 520-how to construct one, 526-to find

the area of, XIV 502 - of forces, VIII. 333-some special uses of, 339

PARALLELOPIPED, XVII 269, X 535—measurement of, XIV. 505—of forces, VIII 339.

PARALLELS of Latitude, XVII. 269, X. 480—of altitude, XVII 269—of declination, ib; IV 2

PARALOGISM, XVII 269. PARALYSIS, XVII 269, 700-in the insane,

XIV. 534 Paramæcium, genus of animalcules, III

201

PARAMARIBO, XVII 269, XI 84 PARAMATTA, town in New South Wales, XVII 269

Parameters, VII 278-variation of, I 810 Paramos, or nariow plateaus in Venezuela, XXI. 525

Paramythia, town in Turkey, XVII. 269. Parana, city, XVII. 779

— province, V 295.
— river, XVII 270, 267, 603, 782.
PARANAGUA, town in Brazil, XVII. 270. Paranahyba, river, XVII 603

Parandra, genus of insects, IX. 144. Paraper, in alchitecture, XVII 270, III 482, 488, 511-in fortification, IX. 797 et seq.

PARAPHERNALIA, XVII 270. PARAPHRASE, XVII 270 Paraphyses, in botany, V. 142. Paraplegia, XVII 700 Parasang, measure, XVII 270; XVI.

276 and n. PARASCENIUM, XVII 270, III 511.

Parasita, order of insects, IX. 26, 261. Parasite, XVII 270. - mineral, XV. 100

mineral, Av. 100

Parasites, or Parasitic plants, XVII. 272, 697; V 101, 221—parasitic growths, in pathology, XVII. 691, 697—parasitic animals, 1b.; insects, IX. 182, 184, 220, 261. Parasmilia, fossil corals, XVII 97.

Parastas, in architecture, III. 511 PARATI, town in Brazil, XVII 272 Paravey (De), his work on the silkworm. IX. 23.

PARCE, the Fates, XVII 272. PARCHIM, town in Mecklenburg-Schwerin, XVII 272.

PARCEMENT, XVII. 272. Pardalotus, genus of birds, XVI. 748. Pardessus (M), on insurance, XII. 393 Pardies (Ignatius Gaston), I 667. PARDON, XVII. 278-royal prerogative of,

VIII 788, 792. PARDUBITZ, town in Bohemia, XVII. 273 PARDUBITZ, town in Bonemia, AVII. 216
PARÉ (Ambroise), XVII. 273—on legal
medicine, XIV 422—his surgical skill
and improvements, XX 817.
PAREDES-DE-NAVA, town in Spain, XVII.

PAREJA (Juan de), painter, XVII. 273. Parenchyma, V. 66, 87; II. 806. Parenchymateux, entozoa, XXI 982. Parent (Mr), on the strength of materials, XX. 757, 759

#### PAR-PAR

PARENT AND CHILD, XVII 273-duties of, 274, 276, XV. 568—parental affection of brutes, V. 703

PARENT - DUCHATELET (A. J. Baptiste), XVII 276

Parenthesis, XVIII 685

Palexus, genus of fossil fishes, XVII 117 Parga, town in Turkey, XVII 276 Pargasite, mineral, XV. 81.

PARHELIA, XVII. 277, XIV 681; XVI 688—colours of, VI. 645—of the planets, IV 62

Paria, Gulf of, XVII 277.
Parian chronicle, XVII 277; III 720
Parias, or Pariahs, Hindu race, XVII 277, V 269

Parietal bones of man, III 19-of the other mammalia, 77

PARIMA (Sieria), XVII 277, XVI. 716. Parimé (Cordilleia of), IL 669, XVII 594—geology of, II 670

Paring plough, II 271 - paring land, 288, 359

PARINI (Giuseppe), Italian poet, XVII

277

PARIS, XVII 277—Chirulgical Academy of, II. 62—Royal Academy of Sciences, -Academy of Painting and Sculp ture, 67—academies of music, architecture, dancing, and medals, 68, 69, of politics, 71—abattoirs of, 11—first ascent of a balloon at, 175-prevalence of the crime of poisoning in, from 1670 to 1680, III 330-dome of the Halle du Bled, 414, XIX 388-architecture of public buildings, III 453-observatory of, 819-institution for the blind, IV. 778-entered by the allies in 1814, X. 168; and in 1815, 174-treaty of, 176, V. 614—catacombs, VI 330—deaf and dumb asylum, VII 686—dramatic criticism in, VIII 156-Pont du Louvre, XII 580, d'Austerlitz, ib., 581—fortifi-cations of, X. 216, 217—distui bances at, in 1834, 210—patron saint of, 449— population, 277—construction of floors in, VII 331, 332-hbraries, XIII 406, 408—variation of the needle, 53, 54; and its dip, 59—barometric pressure, XIV. 668—eocene rocks, XV 212 births, deaths, &c, 618, 619 — newspapers, XVI 196 et seq.—statistics of the press of, 199, 200—Great Exhibition of 1855, IX. 454-Queen Victoria's visit to, X. 238-length of the pendulum at, XVII 384-Aic de Canonsel, and Arc d'Etoile, III. 418, 419 -- work-houses first established in, XVIII 185-police of, 184 et seq -carly printing at, 533non railway-roofs at, XIX 397, 398— magnetism in, XX. 418, 419—Magnetic Society of, 425-suicides in, 800-duties on fish sold in, XXI 72-consumption of tea in. 91-university of, 444-measures, 805 - weights, 806 - Sorbonne, 447-Wellington's visits to, 827, 828 (Dr), on the use of salt, XXI.

974

(John Ayrton), physician, XVII. 285

(MATTHEW), English chronicler, XVII. 285.

- (Plaster of). See Gypsum, and Plaster of Paris.

- Roman actor, VIII. 142 son of Priam, XVII. 285; XVIII. 100.

Parish, XVII. 286-Scotch, XIX. 749parish churches in Scotland. XVIII. 493, 494-English paushes, VIII. 719; union of, for the administration of the poor-laws, XVIII. 312,

(Sir Woodbine), on Buenos Ayres,

V. 726-on the occurrence of meteoric iron, XVII. 620.

Parish-Clerk, XVII. 286. Parish-registers, XV. 600; XVIII. 839. Park, XX. 210, n. See Parks.

- (MUNCO), African traveller, XVII X. 477-his African discoveries, II. 210—literary aid of Bryan Edwards to, VIII. 414—extract from his travels on the standard of value, XV. 420, n .-

## PAR—PAR

his discovery of the course of the Niger, XVI. 265-on the fondness of the Africans for salt, XIX 582 PARKER (Matthew), archbishop of Cantei-

bury, XVII. 287—his English Bible, IV 703.

(Peter), printer, XVIII 538 (Richard), mutiny of, V 560.

(Sir Hyde), V. 484, 493—his expedition against Copenhagen, 579, XVI.

(W.K), on the foraminifera, XVII. 91

Parker's burning-lens, VI 14, 15; XL 275

cement, V 742, XX. 714 economic lamp, XIII 172

Parkes (M1), on the increased temperature of the soil from draining, VIII 131 - on bleaching, IV 757, 758

PARKGATE, town in Cheshire, XVII 288 PARKHURST (John), lexicographer, XVII.

prison at, XVIII. 583 Parks, public, of London, XIII 667-Stn-

ling, XX 701—Stockholm, 705
PARLIAMENT, XVII 288—English, VIII.
758 et seq—bill in, IV. 723—Septembet 758 et seq — bill in, IV. 723—Septennial Act, V 455—attempt to repeal that act, 458—prosecution of printers in 1771 for publishing debates, 473-its right to advise the sovereign as to peace and war, 499—Pitt's plan for reform of, 507, 515-Rood's motion for reform, 536-societies of the " Filends of the People" for procuring leform, 542, 545—M1 Grey's motions for 1 eform, 542, 549—effect of the French Revolution in extending the desire for reform, 545-first meeting of the imperial parhament, 577-agitation for reform, 625, 656, 659—bills for reform, 630, 632, 635, 637, 657, 660—passing of the Reform Act, 663—advantages and disadvantages Act, 668—advantages and disadvantages of parhamentary government, XVII 788—members' privilege of franking letters, XVIII 405, then abuse of, V 468; abolished, XVIII 411—Long, VII 510—Mad, VIII 679—Rump, XIII 165; V. 411-admission of Jews into, XII 783, V 672—journals of, flist commenced in 1607, 381—acts of, to regulate the United States, AXI. 435— Horne Tooke's exertions to procure the publication of debates, 308-origin of parliamentary reporting, XVI. 185.

— House, Edinburgh, VIII 395—roof

of, XIX. 393.

- new houses of. See Westminster (New Palace) - Prussian, XVIII. 673-of the Two

Sicilies, XX 251. Parliamentary papers and notices, trans-

mission of, by post, XVIII. 417.

reports, origin of, XVI. 185. PARMA, city, XVII. 302-school of painting, 72—weights and measures of, XXI. 812-university of, 492

(Duchy of), XVII. 302. (Duke of), his operations in Holland, XI, 570.

Parmacella, genus of mollusks, XV. 374 l'ARMENIDES, Greek philosopher, XVII.

PARMENIO, XVII. 303, XIII 766. Parmesan cheese, XIII 550, 651

PARMIGIANO, Italian painter, XVII 303; VIII. 800-his style of painting, XVII 72.

PARNAHIBA, town in Brazil, XVII. 303. 705—river, 1b

Parnassius, genus of insects, IX. 207. Parnassus, mountain, XVII 308; XL 12
—geology of, 11—height of, XVII 642.
Parnell (Sir Henry), Lord Congleton, XVII. 304-on banking in Ireland, XV.

487. - (Thomas), D.D., poet, XVIL 804. Parnell's locks, XIII 538, 589. Parnopes, genus of insects, IX. 193. Parnus, genus of insects, IX. 116.
Parnus (E. D. Desforges), Vicomte de, XVIL 804

#### PAR—PAR

Paro, river, IV. 822. Parochial libraries, XIII 407 Parodon, genus of fishes, XII. 246. PARODY, XVII 304. PAROL, XVII 305 PAROLE, XVII. 305. Paronychiaceæ, nat. order of plants, V.

193

Paropamisans, in ethnology, IX, 346. Paropsis, genus of insects, IX. 149. - genus of fishes, XII 297.

PAROS, island, XVII. 305-Parian Chronicle, III 720-marble of, XI. 14, XIX.

Parotia, genus of birds, XVI 768 Parotid gland, III 49 - disease of, in hoises, XXI 564.

PARR (Catherine), queen of England, XVII 305; VIII. 705

(Dr), on rheumatism, XIX 142 -(Samuel), XVII 305-his charge of plagiaiism against Dr Middleton, IV 637, n. 4-his edition of Bellenden, 636 -his commendation of Malcolm Laing's History, XIII. 158-his friendship with Roscoe, XIX 417

- young of the salmon, III 152, IX. 591 . XII 239-constitution of the male, IX 594—their identity with smolts, 591 Paria, genus of birds, XVI 806.

Panakects, birds, XVI 782.

Parret, river, XXI. 410. Parihasiana, II. 738.

PARRILASIUS, XVII. 306, XXI 971-paintings of, XVII. 54.

Parrot, XVI 783, XVII 633-parrots in India XI 456.

Parry (Dr) on the pulse, IV. 501, 502his experiments on wool, XXI 905.

(Prof), his filter, IX 581. (Sn Wm Edward), XVII 806—his arctic voyages, X 473; XVIII 171 et seq -on winter in Greenland, XI 42on aurora, IV 249—on the temperature of the arctic regions, VI. 770—on Barlow's correcting plate, XIV 9.

Parseeism, IX. 420 Parsees, or Persees, XL 92, 464—their language, XIII. 208—mythology, VII

Parseval-Deschênes, French admiral, XIX.

Parsimony, in what respects necessary, XVIIL 234.

Parsley, V. 195-culture of, XI 744victors at the Isthmean games crowned with, XVI, 366

Parsnip, V. 195; IX. 760—culture of, II. 321; XI 740.

PARSON AND VICAR, XVII 309-constitute a corporation sole, VII. 413—English parsons, VIII 743. See Benefice

Parsons (Mi.), lus experiments on the fastening of slups, XX. 188.

(Sir William), XII. 480

PARSONSTOWN, town in King's County, XVII. 309, XIII 93

Parthenogenesis, XVII 688
PARTHENON, XVII. 309; III. 461, 503, 514, 515; IV. 166, 167, n. 1—destruction of the, 178-sculptures of Pludias on, XIX. 855

Parthenope, planet, IV. 91.
PARTHIA, XVII. 310—monarchy of, XV. 414-coins, XVI. 390-revolution in, XIX. 847-its wars with the Romans,

825, 334, 344, 346. Participles, X. 772, 790—in Egyptian grammar, XI. 428.

Partick, village in Lanarkshire, XVII

Particles, in Egyptian grammar, XI, 428. of bodies, acted on by attractions and repulsions, XX. 750—kept in their places by balance of forces, ib -forces which connect them change by a change of distance, 752.

Partition, in music, XIX. 788; XV. 740, 741. See Score

Partitions of timber, V. 749. Partners, in ship-building, XX. 190.
Partnership, Limited and unlimited liability, XVII. 313. See Liability.

## PAR-PAT

Partridges, XV 791, IX 762-tunnel net for entrapping, XIX. 92 - partridgeshooting, XX 221 Parturition, XIV 426—time of, in different

animals, III 182 See Gestation, Midwifery.

Parus, genus of bilds, XVI 759 Parys, copper-mine of, II 146. PAS-DE-CALAIS, XVII 331.

PASCAL (Blaise), XVII 323--his Provincial Letters, I 81, 82-his Thoughts on Religion, 82—on pneumatics, IV 450, 451, XVIII. 26, 27—on hydrodynamics, XII. 70-his theorem, X. 550-on the power of truth, XIII. 368-on probability, XVIII 588.

· I., pope, XVII. 331 - II., pope, XVII 331

Pasco, table land of, XVII 470. town in Peru, XVII 331, 474 See Cerro di Pasco.

PASCUARO, town in Mexico, XVII 331. PASEWALK, town in Piussia, XVII 332.

Pashá, or Pachá, IV. 484; XXI 380— Turkish pashas m Egypt, VIII 487 Pasht, Egyptian deity, VIII 437—the hieroglyphic name of Bubastis, V. 707.

PASIGRAPHY, XVII 332 PASIPHAE, XVII 382, XV 251 Pasis, or Pausies, Indian tribe, XVII 18.

Pasites, genus of insects, IX 200. PASKIEWITON (I Fredotovitch), field-mai-

shal, XVII. 332; XIX. 496 et seq-his invasion of Hungary, IV 308, XII 25 Pasley (Sir Chailes), on fortification, IX. 819.

Pasquier (Baron), X 175, 177 et seq -on the want of instruction in the principles of government, VII. 603, n .- police of Paris under, XVIII. 188.

PASOUIN, XVII 332 Pass, or Passade, in fencing, XVII 332. Passage, town in Cork, XVII 332 Passage river, falls of, XVI. 175, XVII

Passalus, genus of insects, IX. 128. PASSAMAQUODDY BAY, XVII 332. Passandra, genus of insects, IX, 83 Passant, in heraldry, XVII. 332, XI 331, 332

Passaro (Cape), in Sicily, XX 244. Passau, in Bavaria, XVII. 332-treaty of.

X. 579. Passemant on marine barometers, IV. 458 Passeri (G. Batlista), XVII. 233.

Passerini (Carlo), his work on insects, IX

Passeroni (Gian Carlo), poet, XVII 333 Passes across the Alps, II. 625.

Passifioracew, nat order of plants, V. 193. Passionano, painter, XVII. 333.
Passion, distinguished from conscience, I.

figurative language appropriate to give expression to, VII 220—natural expression of, XIII 185—distinction between passion and emotion, XIV 579—the passions, 578—classification of, ib .- in poetry, XVIII 95.

Passion-flower order of plants, V. 193 PASSION-WEEK, XVII. 333.

l'assive obedience, V. 718, 719—passive strength, VI. 249.

PASSOVER, XVII. 333, VI. 669, L 469, 470, 482

PASSPORT, XVII. 334.

Pastern, XI. 639 et seq -sprain in, XXI 560. Pastes used as bait in angling, III. 156, n. Pasteur (M), on optics, XVI. 550, 682 Pasto, town in New Granada, XVII. 334. Pastonal, kind of poetry, XVI. 334;

XVIII. 108, 111-theology, ib.-letters, ib.—Pope's, 328.

tribes of Asia, III. 742-manners

Pastures, II. 323-old pastures of England, 824—for dairy cows, VII. 622—in France, X. 248. See Meadows. Patæcus, genus of fishes, XII. 308. Patagonia, XVII. 334—climate of, II. 673

stature of the natives, 691-Patagonian branch of the American aborigines, 677 -mountainsof, XVII. 592, G45-pampas

# PAT-PAU

PATAK, Saros, town in Hungary, XVII 336

PATANI, in the Malay Peninsula, XVII 336.

PATAVINITY, XVII. 336. PATAVIUM, XVII 336, 42.

Patella, or knee-pan, III. 35-sprain of, in cattle, XXI 560

- genus of mollusks, XV. 379 Patellidæ, family of mollusks, XV. 379fossil XVII 111.

Patellimani, insects, IX 94

Patellini (Luigi), his work on insects, IX.

Patent fuels for steam-boilers, XX 653 PATENTS. Letters-patent, for inventions, XVII 336.

- in the United States, XXI 426.

PATERA, XVII 339
PATERCULUS (C. Vellems), historian, XVII
339, XXI 243, 244—Burman's edition
of, V. 787

Paternity, XIV. 426. See Paient and Child

PATERNO, town in Sicily, XVII 339 Paterson (Lieut), on the Tetraodon electucus, VIII 577

- (WILLIAM), XVII. 340-projector of the Bank of England, XV. 155, and of the Scottash colony of Darren, VII. 656 -work by, XIII 292

- town in the United States, XVII.

PATHOLOGY, XVII. 340, 648, XIV 463of the msane, 535-pathological cells, XVII. 650-pathological physiology, 689 -of the nervous system, 698, 700. See Physiology, Disease.

PATIBULUM, XVII. 340; X 352. PATMOS, Island, XVII. 340

PATNA, town and district in India, XVII 341, IV 651—table-cloths made at, VII. 439.

Patos (Lagao dos), in Brazil, XIX 176. Patras, town in Greece, XVII. 341 Patras, lake, XX 239

PATRIARCH, XVIF 342-of Constantinople, XI. 33, 36-antediluvian patriarchs, III. 267.

PATRICIANS, Roman, XVII 342: I 320. XVIII. 9; XIX. 296.

Patricius (Franciscus), works of, I. 25. Patrick (St), XVII 342—his mission to Ireland, XII 465.

- (SIMON), bishop, XVII, 312. - Cathedral of, Dublin, VIII 221. - (St), Order of, XVII. 342; XI 340, XIII 119.

Patriotic fund, XIX 506. Patrobus, genus of insects, IX. 94. Patroclus, Grecian chief, XVII. 343. PATROL, in war, XVII. 343.

PATRON, Roman, XVII. 343—in the Church of Rome, ib.—in the English Church, IL 158.

Patronage, II. 158-law of, in Scotland, V. 669; XVIII. 492, 496. See Veto Act. PATRONYMIC, XVII. 343.

Patta, or Pata, African town, XVII. 343. Parri, town in Sielly, XVII. 343

Pattinson (Mr), his method of separating silver from lead, X111, 290, XV 234.

Patzeuaro, town in Mexico, XVII. 331. PAU, town in France, XVII 314; XVIII. 701.

PAUL (St), XVII. 344; III. 305-the Clermont MS. of his Epistles, VI. 765-Lord Lyttleton on his conversion, XIII. 754his claim to the authorship of the Epistle to the Hebrews, XI. 277—scene of his shipwreck, XIV. 114—his Epistle to Titus, XXI. 291.

PAUL I, II., III., IV., V., popes, XVII.

-I., Czar of Russis, XVII. 851; V. 582; XIX. 488 - his challenge to the sovereigns of Europe, 489-his assassination, 490.

(FATHER), XVII. 351 - Amelot's French translation of his History of the Council of Trent, II. 666. - of Samobata, XVII. 880. THE DEACON, XVII 351.

## PAU—PAX

Paul of Egina. See Ægineta (Paulus). (Lewis), his spinning-machine, XX. 509.

DE LOANDA, XVII. 352, XIII. 531. (ST), town in the island of Bourbon, XVII 351

- (ST), island in the Indian Ocean,

XVII 352; IV 268
Paul's (St), Cathedral in London, XIII. XXI 935, 936-its architecture, III 455-dome, 410, 411-dome-vnult-III 455—dome, 410, 411—donic-vaulting, 413, 414—bell of, IV 629—whispening gallery, VIII 373—hibrary of, XIII. 394—roof of, VI 266, XIX 373—protection from lightning, VI 202 stone employed in building, XX 712-Thornhill's paintings in the dome of, XXI 237.

- (St), Church, Covent Garden, 100f of, XIX 386

Paula, town of Naples, XVII. 239. Pauli (Simon), II 761.

Paulianists, sectaires, XVII 351. Paulicians, Till, XVII 352

Paulin (M1), on the conversion of smolts into guise, IX, 596, n 3-on the salmon fishing of the Tweed, 606, n 1, 2

PAULINUS (M. P. Ameius), bishop of Nola, XVII 352

——— (Suctonius), V. 378 Paulite, mineral, XV 82.

Paulo (San), in Brazil, V. 281, 283, 295. Paulos ÆGINETA, XVII. 352; II. 161;

(H E. Gottlob), German divine, XVII 352-on the death of Christ, XII. 763, n. 1-on miracles, XV, 263, n. 1. (Julius), Roman jurist, XVII. 352.

(Catena), V 380. Paumotu Islands, AVIII. 282.

Paunch of ruminants, III 108.

Paunching, disease in cattle, XXI. 566.
Pauperism, in Glasgow, X. 654; Dr.
Chalmers' experiments on, VI. 404—
New York, XVI. 224— compared with mendicancy, XVIII. 298- progress of, 306 - in Suffolk, 791; United States,

XXI. 425 See Mendicancy, Poor-Laws. Paupers, in England and Wates, VIII. 748; XVIII. 315—proportion of, in workhouses, 749- in Ireland, XII, 529, 530 - London, XIII. 665 - settlement law for, XVIII. 299 - Charles II., act of settlement for, 302- out-door rekef to, 305-Indoor relief, 302. See Poor Laws. Pausanias, Greek general, XVII. 353; XX.

ancient Greek antiquary, XVII. 353—his description of Athens, IV. 159, n. ; 161-his notices of ancient sculpture. XIX. 843 et seq. - Spartan king, IV. 209.

king of Macedonia, XIII, 762. assassin of Philip of Maccdon, XIII. 785.

Patsias, Greek painter, XVII. 353, 52,

Pausilippo (Grotta di), XI. 70. Pausans, genus of inserts, IA. 142.
Pauw (Cornelius de), XVII. 353—on the Chinese, VI. 558, 586, 582.
Pava, in Italy, XVII. 354—university of,

XXI. 492-battle of, XX. 885. Pavias, trees, XVII. 762. Pavilion, XVII. 355—at Brighton, V. 867.

Paving, XIV. 444--with bricks and files, V. 735-with stone, 739-of roads, X1X. 224; streets, 227-with wooden blocks,

PAVLOGRAD, Russian town, XVII. 256. Pavo, genus of birds, XVI, 78d. - constellation, IV. 80.

Pavonia, genus of Insects, IX, 208, Pawn offices, in Ireland, XII, 528. PAWNBROKER, XVII. 855; V. 674-origin of the sign of the three balls, III. 324.

PAWTUCKET, town in United States, XVII.

855. - river, XIX. 146. l'axilloma, genus of insects, IX. 184. Paxillus, genus of insects, IX. 128.

### PAX-PEC

PAXO, one of the Ionian islands, XVII. 355; XII 452

Paxton (Sir Joseph), his Great Exhibition building, III 491, IX. 454-introduced a new material into construction, III 491-on botanical structures, XI 754crystal palace at Sydenham heated by his system, XX. 892; water-works at, constructed by, 1b.

Pay, of officers in the army, VII 202; half-pay, 203—medical, 202, 203—of the royal navy, XVI. 109, 110, 111, halfpay, 113

Payas, XI. 613

Payen on brewing, V 325, 329method of grinding and sifting white lead, XIII 302-on the manufacture of sugar, XX 793, of beet-root sugar, 797 Paykul (Gustavus), his works on insects, IX. 12

Paymaster-general of the British army, III 664-paymaster in the navy, XVI 105

Payne (Thomas), his iron bridges, XII.

(Mr), his pedometer, XVII 360 on the rectitude of God, XXI. 192 -on original sin, 205.

PAZ (La), department of Bolivia, XVII. 355; IV. 821 et seq, 82

PAZ DE ATACUCHO (La), town in Bolivia, XVII. 355—climate, IV. 826—population, 827.

Pazo on the mines of Potozi, IV. 825
PEA, XVII 855, V. 76, 124, 130, 139—as
food, IX. 760—culture of, II. 312; XI. 788—sweet pea, V. 127. PEACE RIVER, XVII 355.

PEAGOE RIVER, AVII 555.

(William), his machine for excavating coal, VII 121
Peach, V. 191—culture and varieties of, XI. 708, 709—peach-house, 728
Peacock, XVI. 786; IX. 762, XVII 638—

of Japan, XII. 690, Java, 704 (Dr), his Reports on Mathematics,

L. 804, n. 1—his Life of Dr Thomas Young, 818, 890, 893, n. 3 - (Mr), his filter, IX. 581

Peak (High), Derbyshire, VII. 753, 754. Peake (M1), his life-boat, XIII. 446—his work on ship-building, XX. 162. Pear, V 191—culture and varieties of, XI

713-composition of, IX. 759-specific gravity of the wood of the pear-tree, XII. 89.

prickly, V. 194.
PEARCE (Zachary), D D, bishop, XVII

PEARL, XVII. 356—of Britain, VII. 69— —Japan, XII. 689—Scotland, XIX. 796 -Sindh, XX 304-mollusks producing, XV. 343, 348 — value of, 348—specific gravity of, XII 88 — mother-of-pearl, XVII. 356

PEARL ISLANDS, XVII 357.

Pearl-divers, VIII. 56

PEARL-FISHERIES, XVII. 357, 444; XV. 348—of Bahrein, IV. 367—Ceylon, VI. 895; VIII. 60-Margarita, XIV. 300.

Pearl-mica, XV 79. Pearl-sinter, XV. 69. Pearl-spar, XV. 92.

Pearl-stone, XV. 72, 132.

Pearl-type, XXI. 401, 402, 403.

Pearsall (Mr), on the phosphorescent effects of electricity, VIII 598, 599.

Pearson (Dr), on the micrometer, XIV.

744, 745 et seq —on cow-pox, XXI. 500.

(EDWARD), D.D., XVII. 387.

(JOHN), D.D., bishop, XVII. 358—on the Messias, XXI. 208

Peasants, war of the, XIII. 731-in Sweden, XX. 865-revolt of, in Switzerland, ib.

Pease Burn and Bridge, IV. 681.
PEAT, XVII. 358; XV. 123; X. 318—
charred, as a manure, II. 304—ashes, as a manure, 414—its use in smelting iron, XII. 542—in Ireland, 507—France, X. 251-Perthshire, XVII. 458. Pebble, specific gravity of, XII. 88.

Peccan-nut, XVI. 395 Peccary, quadruped, XIV. 198.

## PEC-PEG

Pechlin, case of recovery from drowning related by, VIII 181.
Pechurane, mineral, XV 111.

PECK (Francis), XVII 359. PECKHAM, XVII 360.

Peckska, town in Hungary, XVII 503. Pecora, order of mammalia, XIV 202,

Pecquet, physiological discoveries of, II 761, XIV 460. Pecten, genus of mollusks, XV 348, 347

-fossil, XVII 105, 106.

Pectic acid, II 381. Pectine, II. 381.

Pectinibranchiata, mollusks, XV 38I. Pectinidæ, fossil mollusks, XVII 105. Pectolite, mineral, XV 76

Pectunculus, genus of mollusks, XV. 347. 349.

PEDAL, musical term, XVII 360, XV 736. Pedaliaceæ, nat. oider of plants, V 200 PEDESTAL, in architecture, XVII 360; III

511-in Italian architecture, 478. Pedestrian feats, XI 170.

Pedetes, genus of mammaha, XIV. 185. Pedicel, in botany, V. 113. Pedicellina, XV. 321.

Pedicellinea, zoophytes, XXI 1001. Pediculus, genus of insects, IX 262 PEDIMENT, in architecture, XVII 360; III. 487, 511—Doric, 464—Ionic, 466—

Roman Counthian, 475-mouldings for, XIL 808.

Pedipes, genus of mollusks, XV 375. Pedometer, XVII 360; VII. 35 Pedraza (General), XIV 712 Pedro (Dom), empetor of Brazil, XVIII
389, 390; V. 288.
\_\_\_\_\_ II, V 290
\_\_\_\_\_ V, king of Portugal, XVIII 392.

the Cruel, XX 464.

Pedum, genus of mollusks, XV. 348. Peduncle of flowers, V. 113.

PEEBLES, Scottish town, XVII 361-railway, XVIII. 797

PEEBLESSHIRE, XVII 360-mountains of, XIX. 790-agricultural statistics, 796, 797, 798—population, 799.
PEEL (Sir Robert), XVII. 361; V. 648

et seq.—on the Catholic question, 631, 632—his motion for financial reform, 651-on the repeal of the Test and Corporation Acts, 652-his measure for Catholic emancipation, 655-home secretary, 634—his premiership, 644, 669—proposal for removing the ladies of the proposit for removing the sates of unestable bed-chamber, 666—his com-law measure in 1842, VII. 383—his repeal of the com-laws, V. 670; VII. 384—his modification of the tarriff, ib —his Bank Act of 1844, XV. 482, 463—his Police Act of 1829, XVIII 193-on the Irish police force, 206—his schools at Tamworth, XXI. 17—income-tax proposed by, 53; returns under, ib -customs-duties abolished by, 61-his political connection with the Duke of Wellungton, 830.

(Sir Robert, senior), XIV. 251, 259 town in the Isle of Man, XVII. 366: XIV. 246

Peele (George), dramatist, XVII 366his letter respecting Alleyn and Shakspeare, II. 592

Peerage, VIII. 767-rights of, XVI. 281ceremony of the admission of a baron into, IV. 469 — Baron Wensleydale's elevation to, XI. 336, n-abolition of hereditary, in France, X. 206-opposition to Lord George Germaine's eleva-

tion to, V. 498. PEERS, XVII 367--creation of, XVI 281 -privileges, 1b., 282-coronets worn by, XI 336-French Chamber of Peers, X.

- House of See Lords, House of. Peganite, mineral, XV. 74 Pegasidæ, family of fishes, XII. 315. 

genus of fishes, XII. 315. PEGAU, town in Saxony, XVII 367
Pegmatite, mineral, XV. 137—its use in

# PEG-PEL

the manufacture of porcelain, XVIII

Pego, town in Spain, XVII 367.

Pegu, in Eastern India, XVII 367—subdued by the Burmans, V. 782—annexed to the British possessions, in 1853, 785, XI 509-two temples near Syrian in, VII 715—timber of, XXI. 276, 277

Pehlvi language, XIII 208
Peignot (G), on bibliography, IV 707on prohibited books, 712-his classification of books, 715—his bibliographical works, 716

PEILAU, town in Prussian Silesia, XVII. 267

PEINE FORTE ET DURE, XVII 367 PEINT, XVII. 367 PEIPUS, XVII 367, XIII 527 Peiræus. See Piiæus.

Peirce (Prof), on the orbits of Uranus and Neptune, I 832

PEIRESC (Nicolas-Claude-Fabri), XVII 367; II 761.

Peisistiatus See Pisistiatus. Pekalongan, in Java, XVII 367 Pekan, m zoology, XIV. 157.

PEKING, or Pekin, XVII 368-the Pekin Gazette, VI 561-meteorological obser-

vations at, XII. 687 Pekoe, tea, XXI. 85 Pe-la, white wax, IX. 173.

Pelagians, XVII 369; XVIII. 477-their views on original sin, XXI 203

PELAGIUS, XVII 369 — his opinions on baptism, IV 423—on the depravity of human nature, XVIII 477 -on the effects of Adam's sin, XXI. 204

genus of mammalia, XIV. 172.
I. II. Popes, XVII. 370 Pelagosaurus, fossil reptiles, XVII. 152. Pelamys, genus of fishes, XII. 296. Pelargonium, genus of plants, XI 757. PELASGI, XVII 370, XIX 295—their architecture, III. 439—alphabet, II

Pelates, genus of fishes, XII. 277-fossil, 343

Pelaye, his wars with the Moors in Spain, XX. 460. Pelecanus, genus of birds, XVI. 813. Pelecinus, genus of insects, IX 184

Pelecocera, genus of insects, IX. 240. Peleg, VIII. 44 PELESTRINA, town in Italy, XVII 371. PELEUS, XVII 371

PELEW ISLANDS, XVII 371; XVIII 269 Pelham (Lord), on the peace of Amiens, V 586

Pelican, XVI. 813, XVII 634 Pelicium, genus of insects, IX. 94 PELIGNI, THE, XVII. 871. Péligot (M), his analysis of tea, XXI. 82. PELION, mountain, XVII. 372, 4. Polissier (General), XIX. 508.
Pelitarus, French mathematician, discoveries of, I. 558.

Pell (John), mathematician, XVII. 372. Pella, in Macedonia, XVII. 372, XIII 760, 764.

Pellat (Apsley), on the calorific value of coal and coke, XX. 632 Pellerin (Joseph), numismatist, XVII

372. PELLICO (Silvio), XVII. 372; XII 455, XVIII 112

PELLISSON - FONTANIER (Paul), French writer, XVII. 373. Pellitory of Spain, plant, V. 197. Pellona, genus of fishes, XII 237.

Pelocophorus, genus of insects, IX. 111. Pelocotoma, genus of insects, IX. 134. Pelopæus, genus of insects, IX. 195. PELOPIDAS, XVII 373; XXI. 177, 178. Peloponnesian war, IV. 203; XXI 240. Peloponnesis, XVII. 373; XI. 10, 19— Epaminondas' invasion of, XXI 177,

PELOPS, XVII. 873. Pelor, genus of fishes, XII. 280, 283. Pelori, genus of fishes, XII. 304. Pelouze, on a substance like gun-cotton,

PELTA, XVII. 373.

# PEL—PEN

Peltastes, genus of insects, IX. 188 Peltiei (M), Sir J. Mackintosh's defence of, XIII 786

— (M), on electricity, VIII 535— experiments in thermo-electricity, XXI. 653, 627-his thermo-electric pincers, 654—hygrometer, 1b.

PELUSIUM, Egyptian city, XVII 873; VIII. 498—proposed canal between it and Suez, XX 789.

Pelvis, regions of, III 1—bones of, 12—dimensions, &c of, 13, 68—of mammalia, 80—of biids, 85—of reptiles, 88 of fishes, 90-pelvic viscera of the domestic animals, XXI. 570

Pelworm, island, XVII 373 Pemba, island, XVII 373.

PEMBROKE, XVII 373-dockyard at, VIII.

PEMBROKESHIRE, XVII 374. Pemmican, IX. 767, XIV 206

Pemphedron, genus of insects, IX 196. Pempheris, genus of fishes, XII 302 Pen. See Pens

Penæaceæ, nat order of plants, V. 205. Penal Code, VIII 380—Bentham on, I. 393 See Punishment

servitude, XVIII 580, 581. settlement in Tasmania, XXI 29 Penalties for offences against Post-office Acts, XVIII 418

Penance, XVII 389-among the Hindus, XI. 469-Popish doctrine of, XVIII. 336--a doctrine of Mohammedanism, XV. 303.

PENANG, XVII. 375 - or Pulo Penang, XVIII. 516

PENARANDA-DE-BRACEMONTE, in Spain, XVII 275 PENAS DE SAN PEDRO, in Spain, XVII.

PENATES, XVII. 375; I. 514.

PENCILS, XVII. 875—pencil of light, XIII. 450—pencil blue, VIII 319 PENDANT, XVII 876-pendantsin heialdry, 1b -of a ship, 1b

Pendent, in architecture, III. 511. PENDLETON, suburb of Manchester, XVII.

PENDULUM, XVII. 376 - Gahleo's discoveries regarding, I. 592, X. 374—earth's figule, as determined by, I 850, 854; IX 573—early observations, I. 851-invariable pendulum, ib -Katei's convertible, 852-Baily's pendulum observations, ib -Foucault's experiment, 854-its slower vibration at the equator, and explanation by Newton and Huygens, 619-ballistic, IV. 398; XL 111-Condamine on the length of, at St Domingo, VII. 230—revolving, 4, XIV. 410—for determining the velocity of water, XII. 142-Dubuat on the motions of, I. 853, 887-influence of the air on XVIII 48-centre of oscillation, XIX.

of clocks, VII. 3; XVII. 384—revolving, VII. 4—suspension of, 5—regulation of, 6-compensation pendulums, 7, XVII 387-for the great Westminster clock, 6-metronome pendulums,

PENEDO, in Brazil, XVII. 389. Penellinæ, entozoa, XXI 982. PENELOPE, XVII. 389 - genus of birds, XVI. 785.

Penetration of shot, XI. 143
Peneus, river, XI. 11; XXI. 147.
Penguins, XVI. 810; XVII. 634—the soli-

tary penguin, XVIII. 181. PENIG, town in Saxony, XVII. 389.

PENNISULA, XVII. 889; X 488—name of Spain and Poringal, XX. 484.

Peninsular war, V 603 et seq; X. 148 et seq.; XXI. 821 et seq.—Wellington's

tactics, 706 et seq. Penis, anatomy of, III, 69—erectile tissue, 799, 800,

PENITENCE, XVII. 389-order of penitence of St Magdalen, ib.—enjoined by Mo-hammedans, XV. 808.

# PEN-PEN

Penitentianes, act for establishing, XVIII 569-Millbank, 570-Richmond Penitentiary, VIII 221—in New York, XVI 230— Tocqueville's inquiry into the American system, XXI 298.

Penitents, among the Biahmins, V. 269 PENKRIDGE, town in Staffordshire, XVII

Penn (Granville), on the Iliad, X. 603, n 2

- (WILLIAM), XVII. 389, 398-on the character of George Fox, XVIII. 715on Quakerism, 714 et seq

Pennant (Col), slate quarries of, VI. 54 See Penrhyn.

(THOMAS), XVII 394, XIV. 127his History of the English Chase, VI 429—on the coronach of Ireland, VII. 412-on the migrations of the herring, XII 235-on ornithology, XVL 729 on the hunter, XI 645

Pennatulidæ, zoophytes, XXI. 1004. Pennenden Heath, meeting at, V. 653, XX. 100.

Penney (General), XVI 305 Pennicuk on the execution of the Earl of

Morton, XI 88 Pennine Alps, II 623, XVII 596 Penniston, town in Yorkshire, XVII 394

PENNSYLVANIA, XVII 394, XXI, 419-an asylum for persecuted Quakers, XVIII 719—anthracite in, VII 127—news-paper press of, XVI 194—proportion of suicides in, XX 800—debt of, XXI 428 colonisation, 433—wines of, 888. PENNY, XVII 399; VII 70

(Captain), his nothern explora-

- Royal, XI. 745-oil of, XVI 496. postage introduced, XVIII. 411, XXI 67—loss of revenue thereby occacasioned, 68.

PENNYWEIGHT, XVII 399; VII 70. I'LNOBSCOT, river, XVII 899, XIV. 98. PENON DE VELEZ, town in Morocco, XVII.

Penrhyn slate quarries, XVII 620-num ber of people supported by, VI. 54. Penrhyns, coral islands, XVIII. 279.

PENRITH, XVII. 399. PENRYN, XVII 899.

PENS, Peins, or Pencz (Gregor), painter, XVII 399

XVII. 399-Bramah's patent for cutting and holding, V 274—steel-pens made at Birmingham, IV. 732; ink for, XII. 383.

PENSACOLA, in Florida, XVII. 400. - BAY, XVII. 400; IX. 667. PENSHURST, village in Kent, XVII 400. PENSIONARY, XVII. 400-Grand, ib

Pensions, to widows of officers in the army, VII 203—to widows of officers in the navy, XVI. 117—good service pensions, ib.—to mothers and sisters of officers killed in action, 118-charged on post-office revenue, XVIII. 407. Pentaceros, genus of fishes, XII, 276.

PENTACHORD, musical scale, XVII. 400. Pentacrinite, XXI. 994, 995. Pentacrinus, XVII. 98; XXI. 995 l'entactidæ, echinoderms, XXI. 986. PENTAGON, XVII. 400.

Pentamera, genus of insects, IX. 77. Pentamerus, genus of extinct mollnsks, XV. 338; XVII 103, 104.

PENTAMETER Verse, XVII. 400. Pentastoma, genus of entozoa, XXI. 980. Pentapolis. VII 610.

Pentaprion, genus of fishes, XII. 288. Pentapus, genus of fishes, XII. 287.

PENTATEUCH, XVII. 400; XIX. 829 et seq.; XV. 659—Samaritan, IV. 695; XII 692; XIX. 839—Pseudo-Jonathan on, XXI. 23-Jerusalem Targum on, ib. See the Books of which it is composed.

Pentatulon, XVII. 403 Pentatoma, genus of insects, IX. 161. Pentacost, XVII. 403; VI. 669. Pentelicus, marble quarries of, III. 448;

XI. 14: XIX. 848. Penthetria, genus of insects, IX. 229. Penthimia, genus of insects, IX, 170.

# PEN-PER

Pentingorian table, X. 463. PENTLAND FIRTH, XVII. 403; VI 62

— HILLS, XVII 403, VIII 408, XIX. 791—battle of, V. 428 (Mr), his account of the Andes, II

669; IV. 822, 824 Pentonville prison, XVIII 570, 580, 581 Pentremites, fossil echinoderms, XVII. 98,

Penula (Centenius), VI. 298. PENUMBRA, XVII 403; IV 45. PENZA, in Russia, XVII 403; XIX 521. PENZANCE, in Cornwall, XVII. 403. Penzing, in Austria, XVII. 404
Penering, XV. 133—as a building-stone.

PEPIN D'HERISTAL, XVII 404. - king of France, XVII. 404; X. 7,

XII 642. Peplum, or Peplus, XVII 404. Pepo, in botany, V 138

PEPPER, XVII 404—betel pepper, IV 685
—of Cochin China, VII 48—Sumatra,
XX 804—Jamaica pepper, V. 192; XVII 710-Cayenne, VI. 367-longpepper, V. 207-black and white, ib - adulterations of, IX. 770-imports of, VIII 735

older of plants, V. 207
Peppermint, XI. 745—oil of, XVI 496
Pepperwort, order of plants, V 216, 144 Peprilus, genus of fishes, XII. 298 Pepsine, XVII 659.

Pensis, genus of insects, IX 195. PERYS (Samuel), XVII 405, XVI 91-his management of the navy, 93; VIII 85 -hbrary bequeathed to Magdalen College by, XIII 398—use of tea notaced by, XXI 89.

(Mr), his spiral electric battery, XXI. 617.

- (Haseldine), on vegetable respiration, V 105

PERA, suburb of Constantinople, XVII. 405; VII. 301 - steam-vessel, XX 163, 165-descrip-

tion of, 666 PERAK, in the Malay Peninsula, XVII

405. PERAMBULATOR, XVII. 406. Perameles, genus of mammalia, XIV 175

Peranezzi, engravings of, VIII. 808. Perca, genus of fishes, XII, 275-fossil, 343 -scale of, XVII 127.

Perception, in mental philosophy, XVII. 406; XIV. 563—acquired perceptions, 572-difference between it and emotion, I. 345-Aristotle on, III. 549.

PERCEVAL (Spencer), XVIJ. 406; V. 601, 606-his treatment of the sinking fund, X. 330

Perch, fish, XIL 274; IX 764-skeleton of, XII. 208, 210-hyoid bone and gills of, 214-angling for, III. 162-sea-perch, XII. 274.

- measure, XVII 406. Percheton (A. R.), his works on insects, TX 18. Perching, mechanism of, III. 92.

- birds, XVI. 747. Perchloric acid, VI. 468. Perchloride of phosphorus, VI 481. - of tin. as a mordant, VIII, 816.

Percidee, family of fishes, XII 273, 275. Percis, genus of fishes, XII. 273.

Percival (Thomas), physician, XVII 406 on the population of Manchester, XV.

(Mr), on the influence of the stallion in propagation, XI. 636—on the diseases of the horse, 665, 666, 668 Percoidel, family of fossil fishes, XII. 343. Percophis, genus of fishes, XII. 273. Percussion, heat from, XI. 275—centre of, XIV. 413; XIX. 484.

- locks, XI. 98-caps, 158, n. Percy, Earl of Northumberland, his rebellion in Queen Elizabeth's reign, VIII. 712.

(Henry), Hotspur, VIII. 685, 686. (THOMAS), bishop, XVII. 406—on romance, XIX. 254—on the minstrels,

### PER—PER

PERDICCAS, kings of Macedonia, XVII 406, XIII 760, 761. general, XVII 406, XIII. 773

Perdix, genus of binds, XVI 791 Peregnine falcon, XI 248; XVI 745. Perena (Gomez), on brutes, V. 700. (JONATHAN), XVII. 406—on hemp, XI. 312—on milk, XV. 11

Pereire (M), on credit mobilier, XV. 289 PEREJASLAV, in Russia, XVII 407 PEREKOP, in Russia, XVII, 407, VII 503

-isthmus of, 506

Perellian silk, XXI. 783. Perennials, V. 77.

Perez (Antonio), XVII 407.

- (Genes), de la Ilita, XIX. 286 Pereznus on the nature and law of contracts, XV, 567.

PERFUMERY, XVII 408-of Paris, X 256 -perfumes of Arabia, III 342, 361 Pergamus, in Asia Minor, XVII. 409—monarchy of, XV 414—coins, XVI 375 —hbrary, XIII. 383—medical school, XIV. 452

PERGOLESE (G. Battista), musician, XVII 411

Pergusa, lake, XX 243. PERIANDER, XVII 411; VII. 368 Penanth, in botany, V 117. Penibolus, in architecture, III 511. Pericardium, III. 63

PERICARP, XVII 411; V. 135. Periclase, mineral, XV 87.

PERIOLES, XVII 411; IV. 202 et seq-state of Athens in the age of, 160-his encomagement of the theatre, VIII. 136 -his intellectual tastes, XX. 386. Pericline, mineral, XV, 71.

Peridium, in botany, V. 147. Peridot, mineral, XV. 89. See Chrysolite and Olivine

Perier (Casinor), X. 198—ministry of, 204—foreign policy, 205—death, 206 PERIGEE, in astronomy, XVII. 413; IV

36, 37, 38, 131. Perigone, in botany, V. 117, 145.
Plangueux, town in France, XVII 413.

Pengynium, in botany, V. 125 Pengynous stamens, V. 127, 179

PERMITTION, XVII. 413; IV. 62-of comets, 75, 76, 77; VII. 170, 180, 181. PERIM, Island, XVII. 413; XVIII. 818. PERIMETER, XVII 413.

Perinaum, muscles of the, III. 39 Perrop, in astronomy, XVII. 413numbers, 414-in chronology, VI. 665in geology, XV. 195 et seq .- in gram-

mar, XVIII. 685-periods of advance in modern science, I. 799.

Periodical publications in London, XIII. 673—transmission of periodicals by post, XVIII. 417.

Periodicity, in meteorology, XIV. 663. Periodus, genus of fossil fishes, XII 338. Perioeci, XVII 414; X. 485.

Periopthalmus, genus of fishes, XII. 306. Periosteum, II. 823—internal, 828—the main agent in ossification, 829

PERIPATETICS, AVII. 414; III. 535-their denial that air has weight, AVIII 24. PERIPHERY, XVII. 414. PERIPHRASIS, XVII, 414.

Periplus of Hanno, Il. 209; X. 461; XI. 210-of the Erythican Sea, IL 209; XXI 88

PERIPREMIONY, XVII. 414. l'eripteros, in architecture, III. 511. Perischodomus, fossil echinoidea, XVII. 99. Periscii, X. 485.

Periscopic microscopes, XIV. 772. Periscus, VI. 48.

Perisperm, in botany, V. 140. Perispartic motion, XVII. 414. Peristedion, genus of fishes, XII. 282. Peristome, in botany, V. 145. PERISTYLE, XVII. 414; 111. 511.

PERITONEUM, XVII. 414; II. 838. Peritonitis, XVII. 414; in cattle, XXI.

Periwinkle, plant, V. 199-mollusk, XV. 382.

#### PER—PER

PERIFONIUS (Jacob), XVII 414-Durman's attack on, V. 786

PERJURY, XVII 414

Perkins, his apparatus for heating by water, XI 721, XIX 615—on the com-pressibility of water, XII. 78—Perkins' metallic tractors, XX 415 - Perkins' and Heath's steel engravings, VIII 809. Perla, genus of insects, IX 180

Perleberg, town in Prussia, XVII 414 Perlicus, drososcope of, VII 766. Perlides, insects, IX 180

PLRM, town and government in Russia, XVII 414, XIX. 521-Sir R I. Murchison on the rocks of, AV. 205

Permean period, in geology, XV. 205-mollusca of, 403-relithyodorulites, XVII 117-fossil fishes of, 125, 640rocks in Russia, XIX 517-Scotland, 790

Pern (M. de Samt), his organo-lyticon, XVI, 713

Perna, genus of mollusks, XV. 318-fossil, XVII. 106

PERNAGOA, town in Brazil, XVII 415. Persambuco, XVII 415—settlement of, V. 280—population, 295—vegetable pro-

ducts, 294 PERNAU, town in Russia, XVII 416

Pernis, genus of birds, XVI 744 Perochean (D1), on baptising the children of heathers, XV 276.

Peron (M), has account of D'Entrecasteaux's Channel, IV 261-on the mollusca, AV. 327-on sea-serpents, XIX.

Peronia, genus of mollusks, XV. 374. PERONNE, in France, XVII 416; XX. 472. Perophora, genus of mollusks, AV. 332

PERGRATION, AVII. 416. Perotti (Nicolas), XVII 522. Périouse (J. F. Galaup de la), XVII. 416, IV. 420; XVIII 277, 727 Perowskine, mineral, XV 101.

PERPLINDICULAR, XVII. 416; X. 507, 511,

532 Perpetual motion, VI. 131. PERPIGNAN, town in France, XVII. 416:

XVIII. 702. PERRAULT (Charles), XVII. 417.

—— (CLAUDE), architect, AVII. 417— his design for the Louvre, III. 453 definition of "order of architecture,"

463-on the sound of bells, IV. 628. - (D'Armacourt), AVII. 417 - his Fairy Tales, AIA, 287. Perrier (Mr), his experiments on the pres-

sure of the air, XVIII. 27. Penils (Edouard), his work on insects, IX.

Perron (Anquetii du), III. 258; XIII. 4;

AVII. 529-on the cosmogony of the Parsecs, VII. 718. - (Junues Davy du), his table-talk.

11. 738. Perronet (M.), centres constructed by, VI. 376, 377 et seq.—on the construction of roofs, XIX. 385.

PLEROT D'ABLANCOURT (Nicolas), XVII. 417.

Perrotine machine for calico-printing, VIII. 315.

Perrott (Sir John), his government of Ireland, XII. 478

Perrowskite, mineral, XV, 111,

PERRY (James), editor, XVII, 417. - (M C.), commodore, his expedition to Japan, XII. 698.

- liquor, XVII 418; IX. 759. PERSAUS, philosopher, XVII. 418.

Persecution, religious, principle of, I. 532acted on by the early reformers, 539in Scotland, XIX. 773-Kirkendbright, XIII. 101-in Madaguscar, 795-of quakers, XVIII. 718, 719-of the French Protestants, VIII. 125-in ancient Greece, XX. 881.

Persees. See Parsees. PERSEPORIS, XVII. 418-ruins of, 481; IIL 498, 514-taken by Alexander, XIII. 768-cunciform inscriptions at, XVII. 534.

l'erserin, Turkish town, XVIII. 587.

# PER—PER

Perseus, constellation, IV 79. king of Macedonia, XVII 418; XIII 775, XIX 814

- son of Jupiter and Danae, XVII. 418.

Perseverance of saints, XXI 219
Pershore, town in Worcester, XVII. 418
Persia, XVII. 419; III. 733, 746—conquered by the Arabs, 363-ancient architecture, 438-climate, 736-horses, 740—notices of its history, 742—manufactures and commerce, 756-calendar, VI 78, 674 - war with the Romans, VII. 307-invaded by Juhan, 308-Justin and Justinian's wars with, 312geometers of, X. 503 - conquered by Alexander, XIII. 767 et seq; his proceedings in, 771—Persian monarchy, XV 412, 414—empire, III. 742, XI 542—mysticism, XV 756—mythology, 763—coins, XVI. 390, 392—zend, or old Persian language, XVII 529—deserts of, 614—heights of mountains in, 643— Russian war with, XIX. 496—sculptured remains of, 847-revolt of the Zidonians against, XX. 269—production of silk, 277—early use of tea in, XXI 88—

steam-ship, XX. 665-comparative size of, 641

weights and measures, 812-tobacco,

-wines, 886-map of Persia, XVII.

Persian bernes, a dyestuff, VIII 318 - Gulf, XVII 443

Plate.

Persians, in ethnology, IX. 346—their manner of adolation, II. 150—behief in angels, III 141-Anquetil du Perion's collection of their sacred writings, 259 -Antioch destroyed by, 274-ancient armies, 623-character, 749-then cultivation of astronomy, 795-baths, IV. 506—Bibles, 700—castes, VI. 315—carpets, 269, 270—stoves, 556—invasion of Greece by, IV 198 et seq -invasion and conquest of Egypt, VIII 465, 474—Jerusalem taken by, XII 784—wars with the Romans, XVII 195; XIX. 347, 348, 349 — libranes, XIII. 382 — language, 208 — education, XV 807—then inva-sion of Greece. XX. 500.

Persic version of the Scriptures, XIX. 839. Persius Flacous (Aulus), XVII 444—Sir Wilham Drummond's translation of, VIII. 194; Gifford's, X. 622—poetry of, XVIII 105

Person, XVII. 444—injuries against the, XIV. 428—safety of, a basis of law, XIII. 256—in grammar, X 767, 789. Personal Identity, XIV. 425, 618.

PERSONALITY, XVII. 444; XIV. 617-the consciousness of, 584—divine personality of the Holy Spirit, XXI. 217.

Personate corolla, in botany, V 124 PERSONIFICATION, XVII 444; XV. 759. Persoz on brewing, V. 325, 329. Perspective, XVII. 445—history of, XIII.

Perspiculty of style, Aristotle on, III 558 -rules for the attainment of, XIX 141. Perspiration-effects of electricity on, VIII.

602-obstructed by damp clothes, IX. Persuasion, XIX. 118-process of, 127-

relations between it and poetry, 137. Perri, Scotch town, XVII. 450.

PERTHES (C. Friedrich), bookseller, XVII. 459

PERTHENIRE, XVII. 454—agricultural sta-tistics, XIX. 796, 797, 798—population, 799—ordnance survey of, XXI 334.

PERTINAX (Helvius), Roman emperor, XVII 460-his reign, XIX. 345. PERTUIS, town in France, XVII. 460.

Perturbations, planetary, I. 811; III. 809; IV. 61.

Perty (Max.), his works on insects, IX. 17. Pertz (Dr), annals of G. G. Licinianus published by, XVII. 215—his mode of restoring the characters in palimpsests,

PERU, XVII. 460; IL 685, 704-climate, 672, 673-ancient civilization, 687-revolution, 701-ancient agriculture in, 251

### PER—PET

-suspension bridges, 686; III. 131expeditions of the bucaneers against, 712-castes, VI 316-invasion of Chile, 552-French trade with, X 260mythology, XV. 767-mines, 237-metallic produce, 248-use of coca in, VII 46 — west coast rainless, XVII. 615abundance of silver in, 622-height of mountains, 644, 645-produce of precious metals, XVIII 461, 462—Prescott's History of the Conquest of, 504, 506ancient roads in, XIX. 228-postal system, XVIII 424—weights and measures, XXI. 812—map of, VII Plate See Almagro, Pizarro, Bolivar, Columbia, Pernylans.

PERUGIA, in Italy, XVII 474, 243—university of, XXI 492

(Lake of), XVII. 474, 242; XII

PERUGINO (Pietro), painter, XVII. 475; XIX. 861

Perusia, war of, XIX 329.

Perussi on perspective, XIII 449. Peruvian Bark, XVII. 475; IV. 444. See Cinchona

Peruvians, skulls of, II. 677-compared with the Chinese, 687-language of, 689-appearance and character of, 1b -Indians of Bolivia, IV, 828, 830their tradition of the deluge, VII 719. See Peru.

PERUWELZ, town in Belgium, XVII. 475. PERUZZI (Baldassare), architect, XVII. 475, III. 452.

Perwitzky, fur-skinned animal, X. 348. PESARO, town in Italy, XVII 476-manufacture of pottery at, XVIII 432

PESARO - E - URBINO, province in Italy, XVII. 476

Pescara, river, XX. 238.

PESCE (Nicola or Cola), Sicilian diver, XVII 476, VIII. 56

PESCHIERA, town in Italy, XVII 476. Peschito version of the Scriptures, XIX. 839—in British Museum, XIII 393. Pescia, town in Tuscany, XVII 476 PESCO-PAGANO, town of Naples, XVII

476. PESHAWUR, in India, XVII. 476; XVIII.

687, 690, 691.

Pest. See Pesth.

or pestilence. See Plague.
PESTALOZZI (J. Heinrich), XVII. 477; XV 809

PESTII, XVII 479-population, XII 11 trade of, 17-fairs, ib.-university, 18; XXI 492 - museum, 1b - hbraries, XIII 423.

Pet and Jackman's exploratory voyage, XVIII 165.

Petagna (Vincent), his work on insects, IX. 7.

PETALISM, XVII 480, 10 Petalite, mineral, XV. 72.

Petaloideze, sub-class of plants, V. 180, 210.

Petalocheirus, genus of insects, IX. 163. Petals of plants, V. 117, 123 Petasus, ancient hat, XVII, 709.

PETAU (Denis), XVII. 480.

Petaurus, genus of mammalia, XIV. 176. PETCHORA, river, XVII. 480, 647; XIX. 515

PETER, apostle, XVII. 480; III. 375. I, Czar of Russia, XVII. 483—his tax on beards, IV. 528-reign of, XIX. 477—his constitution for the church in Russia, XI. 35—St Petersburg founded by, XVII. 486-statue of, 491; XIX.

- II, XVII. 483—reign of, XIX 481 - III., XVII. 483; VI. 335—reign of, XIX. 482-funeral, 489.

of Bloss, XVII. 483 (St), and St Paul, harbour of, in Kamtschatka, XVII 501 - the Hermit, XVII. 483; III. 635;

VII 524. Peter's (St), church, at Rome, III 452; V. 274; VI. 376; XIV. 738; XIX. 368—mosaics of, XV. 653—stone employed in building, XX. 712.

# PET-PET

PETER'S PENCE, XVII. 484 Peter-le-Port, in Guernsey, XVII 485. PETERBOROUGH, XVII 484

(EARL or), XVII. 484—his Spanish expedition, V. 449. See Mordaunt, Charles.

Peterbote, mountain in the Mauritius, XIV 362-affords evidence of the absence of earthquakes, XVII 617.

PETERHEAD, XVII. 484--effects of the tides at, XI 218

Peterloo, affair of, XIV 251, XVII 362. Peters (Col.), on horsemanship, XI 674. (BONAVENTURA), Dutch artist,

XVII 485 - (M1), his microscopic writing, XIV.

- (M.), on the parallax of stars, I. 865; IV 96.

PETERSBURG (St), XVII. 486 - Imperial Academy of Sciences at, II 65-Academy of Arts, 67, of Languages, 71architecture of public buildings, III.
454—port of, IV. 404—Bible Society, 704
—sea-walls, VIII. 645—foundation of, XIX 478-schools and other establishments at, 485, 531—climate, 519—Gazette, 546—libraries, XIII. 424—meteo-10logical observations at, XIV. 686.

problem, XVIII. 601. a government in Russia, XVII

492 - town in Virginia, XVII 493. Petersen on language, XIII 198 PETERSFIELD, town in Hants, XVII. 493 PETERSWALDAU, town in Prussia, XVII.

Peterwaraden, battle of, IX 370 Peterwardein, Austrian town, XVII 493 Petetin (M), case of mesmeric phenomena related by, XX 424—his work on animal electricity, 1b.

PETHERTON, North and South, XVII 493 PETHORA GURH, in India, XVII. 493. Petic, Mexican town, XIV. 727. Petiole, V. 87, 92.

PETION DE VILLENEUVE (Jerome), XVII. 493 : X. 67, 68, 83,

governor of Hayti, VIII. 257, XI 257. Petis de la Croix (François), XVII. 494

PETIT (Jean-Louis), surgeon, XVII. 494-his surgical improvements, XX. 818. (PIERRE), mathematician, XVII

494—on the law of cooling, I 952—on the pyrometer, XVIII. 703.

—— case of, X. 231.

PETIT-CANAL, town in Guadaloupe, XVII. 494.

PETITIO PRINCIPII, XVII 494, IX. 477. Petitions, transmission of by post, XVIII. 417.

PETITOT (Jean), XVII 494. Petrver (James), botanist, XVII. 494
Petiveraceæ, nat. older of plants, V. 204. Peto (Sir S. M.), his improvements at Lowestoft, XIII 704.

PETRA, XVII. 495, III. 361; VI. 350 XI. 70

PETRARGA (Francesco), XVII 496, 552on the blunders of transcribers, IV 706 —his kind offices to Boccaccio, 801—his house and tomb at Arqua, III 674-his poetry, XVIII. 95, 109-his imitators, **110** 

Petrels, birds, XVI 811. Petri (Olaus), XVIII. 827; XIX 697 Petricola, genus of mollusks, XV. 350-fossil, XVII 108.

PETRIFACTION, XVII. 501. See Paleontology PETRINIA, town in Austria, XVII. 501.

Petroleum, XVII. 501, 422, 602; IV. 786; XV. 124—in Burmah, V. 779—Cuba, VII. 565—Derbyshire, 755—New York, XVI. 215. Petrology, XV. 156.

Petromyzon, genus of fishes, XII. 220, 224, 228,

Petromyzontidæ, family of fishes, XII. 228. Petrontus (Arbiter), XVII. 501—Burman's edition of, V. 786.

# PET-PHA

PETROPAULOVSKI, town in Russia, XVII. 501; XII 41-attacked by the allies in 1854, XIX. 507.

- town in Siberia, XVII. 501 Petroscutes, genus of fishes, XII 222, 308, 309

PETROVSK, town in Russia, XVII 501 PETROZAVODSK, town in Russia, XVII. 501

Petse, town in Turkey, XVII 501. Pett (Phineas), XVI 92; XX, 128.

(Peter), XVI 92, 93, XX, 128-

Sovereign of the Seas, man-of-war, built by, ib; VIII 210 PETTY (Sir William), XVII 501—on the

population of Iteland, XII. 507—on political economy, XVIII. 217, 251, n V. 600; X 330, 335.

Pettychaps, bird, XVI 756 Pettycur, XIII. 93

Petunculus, genus of fossil mollusks, XVII.

Petunze, crystallisation of, VII. 559. PETWORTH, in Sussex, XVII. 503 PETZKA, town in Hungary, XVII. 503 Petzval (M), his photographic lens, XVII.

Peutingerian Table, XIII. 418, and n. 3, X 463

PEWTER, XVII. 503-specific gravity of, XII. 88.

Peyer (Conrad), anatomist, IL 763. Peyerian glands, III. 61. Peyrard's burning mirrors, VI 8, 9

Peyron (Prof ), his discovery of part of the Theodosian code, VI. 744, XVII 214his mode of restoring palimpsests, 213

—Egyptian pupyri published by, 263. Peyronnet (M. de), X 192 et seq, 213 Peyton (Mr), sportsman, XII. 41. PÉZENAS, town in France, XVII. 503. Pezold (Dr), on animal magnetism, XX.

Pezoporus, genus of birds, XVI 783 Preffel (G. Conrad), poet, XVII 504
Preffers, in Switzerland, XVII 504mineral waters of, XV 37

Pfister (Albert), early printer, XVIII 532 PFORZHEIM, town in Baden, XVII 501 Prullingen, town in Wurtemberg, AVIL

Phacochocrus, genus of mammalia, XIV. 197—teeth of, XVI. 414, 468. Phacolite, mineral, XV. 76.

PHEDO of Elis, XVII. 504. Phædon, genus of msects, IX. 150. PHEDRUS, XVII 504-his fables, IX. 462-Cunningham and Clerk's editions, VII. 587—Burman's edition, V. 786—Bent-

ley's edition, IV 659 - dials of, VII 774. Phænogamous plants, V. 76 PHAETHON, XVII. 504. Phæton, genus of birds, XVI 815. Phalacrocorax, genus of birds, XVI. 813.

Phalacrus, genus of insects, IX. 151. Phalæna, genus of insects, IX. 216-paphia, XX. 288—P cynthia, ib

Phalamites, section of moths, IX. 216. Phalamers, mammalia, XIV 175, IV 260. Phalanges of the fingers, III 34—of the toes, 36, 37—in the mammalia, 82—in reptiles, 88—birds, 86.

Phalangista, genus of mammaha, XIV. 175—dentition of XVI. 448. Phalangium, genus of arachnides, III. 387.

PHALANK, XVII. 504-Spartan, III. 625 Athenian, ib.-Maccdonian, 626, 627; XIII 765.

PHALARIS, XVII. 505-controversy about the Epistles of, IV. 188, 658. Phalaropes, bilds, XVI. 804. Phalereus (Demetrius), IV. 699. Phaleris, genus of birds, XVI. 810. Phalaropus, genus of birds, XVI. 804.

Phalerum, IV. 172.

PHALGU, river, XVII. 505 Phanæus, genus of insects, IX. 120. Phanerogamous plants, V. 76-arrangement of, 180.

Phaneromycteres, section of fishes, XIL

# PHA-PHI

Phania, genus of insects, IX. 248 Phantasm, Aristotle's notion of, III. 549. PHANTASMAGORIA, XVII 505. Phantasmagoric apparatus, XVL 697 Pharamond, X. 2 Pharaoh, Egyptian kings, VIII 457 et seq

—Egyptian agriculture under, 427.
Pharaoh-Hophra, VIII. 464.
Pharaoh-Necho, VIII. 464.
Pharaoh-Necho, VIII. 465.
Pharmaceutical Society, XIV. 465. Pharmacolite, XV. 96.

PHARMACOPŒIA, XVII. 506.
PHARMACY, XVII 506—characters of abbreviations in, VI 419
Pharmakosiderite, XV. 102.
PHARMABAZUS, XVII. 506—his invasion of

Egypt, VIII 466. Pharnaces, kings of Pontus, XVIII 292 Pharopteryx, genus of fishes, XII 310 Pharos, XVIL 506, IL 469, 472, VIII. 496; XIII 463.

Pharpar, river, II 9, XX 904. Pharsalus, in Thessaly, XVII. 506—battle of Pharsalia, XIX 326

Pharyngeal teeth of fishes, XII 227 Pharyngobranchu, sub-order of fishes, XII.

Pharyngognathi, order of fishes, XII 264 Pharynx, muscles of the, III 39—anatomy of the, 59—in insects, IX. 51. Phasaelis, XII 770.

Phascogale, genus of mammalia, XIV. 175
—dental system of, XVI. 447 Phascolarctos, dentition of, XVI. 448 Phascolomys, XVII. 175-dentition, XVI.

Phascolosoma, zoophytes, XXI. 987. Phascolotherium, fossil mammal, XVII. 158—jaw and teeth of, XVI 448. Phasia, genus of fishes, IX. 247

Phasianus, genus of birds, XVI 788 Phasingars, XI 466. Phasma, genus of insects, IX 157.

Pheasant, XVI. 790, IX. 702; XVII 633
—shooting of, XX. 222—of Nepaul, XVI. 143—Sumatra, XX. 804.
Pheasants, Isle of, XI 90.
Phefel (M), blind poet, IV. 780.
Phenakistoscope, XVI. 697. Phenakite, XV 88 Pheneus, in Arcadia, XVII. 506. Phengite, mineral, XV. 77.

Phenican, VIII. 301.
PHERECRATES, XVII. 507.
PHERECYDES, historian, XVII 507. - philosopher, XVII. 507 Pheron, XI. 388

Phialia, in Arcadia, XVII. 508. Philalura, genus of birds, XVI. 751
Philalura, genus of birds, XVI. 751
Philalura, XVII 507, 54, 81; XIX 855.
Phido of Argos, sculptor, XIX. 852.
Philalura, in Arcada, XVII. 508.
Philalura Marbles, XIX. 856. Philadelphacese, nat. order of plants, V.

192. PHILADELPHIA, city in United States, XVII. 508—climate of, 396—commerce, 397— university at, 398—Bible Society, IV. 704 - meteorological observations at, XIV. 688—mortality in, XV 609—news-papers of, XVI. 194—solitary system of prison discipline at, XVIII. 571—bridge

over the Schuylkıll at, I. 878—Washington's retreat to, XXI. 751—military operations at, in 1777, 752. in Asia Minor, XVII 511. Philadelphus, king of Egypt, XI. 391. Penne, island in the Nile, XVII. 511—

antiquities at, VIII. 514
PHILENI, XVII. 511, VI. 281.
Philanthropenus, VII. 319.
Philanthus, genus of insects, IX. 196. Philedon, genus of birds, XVI. 753. PHILEMON, Greek dramatist, XVII. 511; XIV. 495.

- and Baucis, IV. 513. Phileremus, genus of insects, IX. 200. Philesiace, nat. order of plants, V. 210. Philesiace, nat. order of plants, V. 210. Philetus of Cos, a dwarf, VIII. 270. Phileurus, genus of insects, IX. 122. PHILIP, kings of Macedonia, XVII. 511.

# PHI-PHI

Philip, father of Alexander the Great, XIII 762—his military talents and army, III 626—orations of Demosthenes against, VII. 728—his death and character, XIII 765—his war with the Romans, XIX. 312.

kings of Spain, XVII. 511. II of Spain, XVII 511—his policy towards the Netherlands, XI 562-his marriage with Queen Marry, VIII. 708—Portugal conquered by, XVIII 384—Prescott's History of, 504, 505—reign of, XX 469-character, 470.

III, reign of, XX 470. IV, 1cign of, XX. 470 V., reign of, XX. 471

kings of France, X. 12 et seq. II of France, his expedition to the Holy Land, VII. 525

the Arabian, Roman emperoi, XXX 848

the Tetrarch, XII. 772

- the Fair, his prosecution of the Templars, XXI 148 Philiphaugh, battle of, V. 407, XX 40 Philippe, kings of France, XVII. 511

See Philip

- (Lous), king of the French, X 202-his reign, ib - visit to England, in 1845, 222-abdication, 236-death and character, 238 - conduct at Jemmappes, 72, n—public works in Paris executed by, XVII 280—police and press under, XVIII. 188, 189—and Talleyland, XXI 14.

PHILIPPEVILLE, town in Algeria, XVII 511
PHILIPPI, in Maccdonia, XVII. 511—battle of, XIX. 329.

- (R A.), his work on insects, IX. 17 PHILIPPIANS, Epistle to the, XVII 512.
PHILIPPIAS, XVII 512; VII. 728—of Ciccio, XIX. 328.

PHILIPPINES, The, islands, XVII 512-British expedition against, in 1762, V 466—language of, XIII 218—serpents, XIX. -weights and measures, XXI. 813. New, VI 248 See Caroline Islands
Philippopolis, town in Turkey, XVII.

PHILIPS (Ambrose), poet, XVII. 513-his

nillis (Amoroso), poet, XVII. 513—his quarrel with Pope, XVIII 329. — (Jour), poet, XVII. 514. — (Mr), of Ely, on the culture of the osier, IV. 488.

- (Robert), on road-making, XIX. 225.

Philipstown, XII. 92. Philistia, XVII. 181, 514. PHILISTINES, XVIL 514, 181. PHILISTUS, historian, XVII. 515; VIII. 34. Phillip (Captain Aithui), governor of New South Wales, IV. 271; XX. 895.

——— (Port). See Victoria. Phillipps (Srr T.), his library, XIII 309. Phillips (Captain), his improvements on

capstans, VI. 224.

(Edward), on Milton, XV. 31.

(John), of York, description of his electrophorus, VIII. 607

—— (Prof ), on boulders, VII. 723—on amber, II. 655—on joints in rocks, XV. 164-on the Yorkshire colites, 207-his

thermometer, XXL 224
(RICHARD), chemist, XVII. 515.
(SAMUEL), XVII. 515.

(THOMAS), portrait-painter, XVII. 515.

(WILLIAM), mineralogist, XVII. 516.

Phillipsite, mineral, XV. 77. PHILO JUDÆUS, XVII. 516; XIX. 828, 829. of Byzantium, XVII. 516.

Philodotus, genus of insects, IX. 128. Philodromus, genus of arachnides, III. 382.

PHILOLAUS, XVII. 516; X. 498-nomy of, III. 788.

PHILOLOGY, XVII. 517--contributions to by missionaries, XV. 275—cultivated in Denmark, XIX. 696—philological eth-nology, IX. 343—Rask's services to, XVIII 808. See Language, Grammar, PHILOMELA, XVII. 542.

### PHI-PHO

Philometor, Egyptian king, XI 391. Philopator, Egyptian king, XI 391. Philopanen, Greek general, XVII 542; II 82: III 629.

Philoprogenitiveness, XVII 562 Philosopher's stone, XVII 542, VI 437. PHILOSOPHY, XVII 542, XIV 552-Aristotle's, III 536 - Kant's, XIII. 46 - Oken on, XVI 500 - of history, XI. 544 -Plato's, XVII 792-requisites of a good history of, V 692-benefits conferred on, by palæontology, XVII. 91—as distinguished from philology, 517 the scholastic, 521—applications of phrenology to, 565—positive philosophy, XVIII 401—philosophical speculations a source of corruption to Christianity, I 506, 507, 516; reasons why they are all equally wrong, 517—utility of a life devoted to, XX 387 See Cartesian, Experimental, Montal, Moral, Natural, Newtonian Philosophy

PHILOSTRATUS, XVII. 543—his Apollonius of Tyana, III 301 -his Life of

Philoxenian version of the Scriptures,

PHILOXENUS, Greek poet, XVII. 543. PHILTER, XVII 543. Philydraceae, nat order of plants, V 213. Philypnus, genus of fishes, XII 307.
Philypnus, genus of fishes, XII 307.
Philyps, Egyptian king, VIII 155
Phipps (Captain J. C.), his Arctic voyage,
XVI 182; XVIII 170.

— (William), diving feats of, VIII. 60. Phlebenterism, XV. 356, 357. Phlebolites, XVII. 691. Phlebotomy. See Blood-letting. Phlegon, Greek historian, XVII. 548. Philius, in the Peloponnesus, XVII. 548. Phlogopite, mineral, XV. 78. Phlox, order of plants, V. 200 Phobetor, genus of fishes, XII 282. Phoca, genus of mammalia, XIV. 171. PHOCAA, Ionian city, XVII. 543.

Phocena, genus of mammalia, XIV. 225 Phocas, Greek general, XIX. 469 Phocia, planet, IV. 91. Phocian wai, XIII 764; XXI. 179.

PHOCION, Athenian general, XVII. 543

PHOGION, Athenian general, XVII. 543, VII. 726, XIII. 735.
PHOGIS, in Greece, XVII. 513; XI. 12, 18.
PHORIUS, XVII. 543. See Apollo.
PHORINCIA, XVII. 543, 182; XX. 905—architecture of, III. 438—astronomy, 783—commerce, VII. 184; in the Black Sea, IV 745; with Britain, V. 376—Sanchoniatho's History of, VII. 880—dyeing, VIII. 272—alphabet, II. 612 dyeing, VIII. 272—alphabet, II. 612—language, XIII. 209—mythology, XV 765—coins, XVI. 359, 379—art, XVII.

765—coins, XVI. 560, 560—a.,
48—sculpture, XIX. 847.
Phoenicians, history of, XX. 905—in
Cornwall, VII. 407, in Ells, VIII. 634;
Palestine, XVII. 109; Mauretania,
XIV. 360—their knowledge of geography, X. 460—sacrifice of human victims, XIV. 361—voyages, XVII 161 and n. 2; X. 460; XVI. 1; XXI. 26—shipping, XX. 117—tombs and antiquities, 269; in Spain, 457-colonies planted by, 906-their religion, ib .literature and art, ib.

Phoenicophous, genus of birds, XVI 778.

Phoenicophorus, genus of birds, XVI. 808.
Phoenicochroite, XV. 106.
Phoenix cycle, VIII 461.
— Islands, XVIII. 278.
— Park, Dublin, VIII 219.
Pholadide, family of mollusks, XV. 352 fossil, XVII. 108.

Pholadomya, genus of mollusks, XV. 350—fossil, XVII. 108.

Pholas, genus of mollusks, XV. 352, 347

—P. dactylus, 352—its luminous properties, XIII. 457—in Malta, XIV. 115. Pholcus, genus of arachnides, III. 380. Pholerite, mineral, XV. 79.

Pholidophorus, genus of fossil fishes, XII. 285. Pholicrus, genus of insects, IX. 121.

Pholis, genus of fishes, XII. 309. Phonetic characters, XI. 370; II. 607: XX. 676.

### PHO-PHR

Phonetic signs, XI. 418. Phonogram, XX. 676. Phonography, XX 676.
Phonolite, AV 132
Phonotypy, XX 676.
Phonotypy, XX 676.
Phonolitur, in India, XVII 543. Phora, genus of insects, IX 258 Photmium tenax See New Zealand Flax. Phorus, genus of mollusks, XV 382.

Phospenite, mineral, XV 165 Phosphate of lime, VI 478—as manue, II 415—phosphates indispensable to the growth of plants, VI. 523.

Phosphorescence, of minerals, XV 59—of the sea, XVII 574; XXI, 998—Becquerel's explanation of the phenomena of, 632

Phosphorescent bodies, XIII. 456, 458; X 409-spider's eyes, III, 378, n -Canton's phosphorus, VI. 202-certain crustacca, VII. 539—annelides, XI. 293—glowworm, IX 107—flieffies, 106, 168—medusides, XXI 998—is the moon phosphorescent? IV 41 — effects of electricity on, VIII 508.

Phosphore acid, VI 479; XV 64—in plants, II, 388

plants, 11. See Phosphorits of Sweden, XIX. 700. Phosphorite, XV. 91; XIII 457. Phosphorochaletic, XV. 103. Phosphorous acid, VI 479. Phosphorous, XVII 543; VI. 478—terchloide of, 480—perchloide of, 481—

how to inflame it by electricity, VIII. 590—specific gravity of, MI 59 its poisonous quality, MIV. 455—its use in making matches, 352—red, or amorphous, ib. — phosphorus electrometer, VIII. 622.

Phosphurets. See Chemistry.
Phosphuretted hydrogen, VI. 480—sometimes found in the atmosphere, II.

PHOTIUS, XVII. 543, XL 31—Lexicon of, XVIII 367, 369. PHOTO-GALVANOGRAPHY, XVII. 511.

Photo-lithography, XIII, 514. Photo-metallography, XVII, 544. Photo-zincography, XXI, 337. Photo-graphy ENGRAVING, XVII, 544.

PHOTOGRAPHY, XVII. 541-history of, I. 922—importance of, 924-use of gui-cotton in, MI. 95-employed for registering observations, AIV. 666 - - employed in micrometers, 745, 746, 759, 761—its application to the microscope, 801-employed in detecting criminals, XVIII. 190-1ts use in taking stereo-scopic pictures, XX. 690 Its use in the

scope pertures, AX, 530 A4 use in the trigonometrical survey, XM, 536, Phorosurve, XVI, 555; VI, 781; X, 429; XIII, 451, 465, Photometry, XVI, 555, first notions of, L.

753-advanced by Bouguer, ib—Lambert's freatise on, 754.
Phoxichilus, genus of arachnides, III. 386.
Phrantes, XVII. 310.

Phraetocephalus, genus of fishes, XII. 261.

Phragmoceras, fossia nollusis, XVII. 112.
Phragmoceras, fossi nollusis, XVII. 112.
Phraottes, XIV. 421; XVII. 434.
Phrasas, in music, XVII. 566; XV. 719.
Phrascogram, XX. 676.
Phrascography, XX. 679

PHRASING, in music, XVII. 556. Phre, Egyptian delty, XI, 382, Phrenic nerve, 111, 58,

Phrenitis, in animals, XXI, 575. Phreno-mesmerism, XX 440.
Phreno-mesmerism, XX 440.
Phreno-mesmerism, XX 440.
Phreno-mesmerism, XX 440.

382-division of the mental faculties, XVII. 673; objections to, lb. Gall, Spurzhelm. Phinxus, XVII. 568; XI. 200.

Phryganea, genus of insects, IX, 180-

their use in angling, III. 149. PHRYGIA, in Asia Minor, XVII. 508—coins of, XVI. 378.

Phrygian language, XIII. 200, 210. Phryne, courtezan, XVIII. 431. PHRYNIGHUS, tragic poet, XVII. 568.

comic poet, XVII. 568.

ARHABBIUS, grammarian, XVII.568.

# PHR—PHY

Phrynichus, Athenian, IV 207. Phrynus, genus of arachnides, III. 384 Phthah, Egyytian deity, XI 381-temple of, XIV 493

Phthiria, genus of insects, IX 233 Phthisis, or pulmonary consumption, case of its cure by riding, XI 673—effect of the climate of Egypt on, VIII 423-unknown in very elevated regions, XVII 611-Dr Rush on, XIX 466in the domestic animals, XXI 573 Phucocætes, genus of fishes, XII 310. PHUKOK, Island, XVII 568

Phulowdee, town in India, XVII 568. Phut, VIII 46

Phycis, genus of fishes, XII 270 - genus of insects, IX 218 PHYLACTERY, XVII 568
Phylactolemata, zoophytes, XXI 1001 Phyle, castle near Athens, 1V 209 Phyllidia, genus of mollusks, XV 371. Phyllium, genus of insects, IX 157 Phyllobius, genus of insects, IX 139. Phyllocharis, genus of insects, IX 149 Phyllodoce, genus of annelides, XI 298 Phyllodus, genus of fossil fishes, XII 338, XVII. 128.

Phyllolems, genus of fossil fishes, XII 337, XVII. 125

Phyllopa, genus of crustacea, VII 543 Phyllopertha, genus of insects, IX 125. Phyllophagi, section of insects, IX. 123. Phyllopteryx, genus of fishes, XII 315 Phyllostoma, genus of mammalia, XIV 148

Phyllotaxis, in botany, V 85
Phyllurus, genus of reptiles, XIX 37.
Physa, genus of mollusks, XV 374—fossil,
XVII 111.

Physaloptera, zoophytes, XXI 981. Physcon, king of Egypt, VIII 469—his cruelties at Alexandiia, II 470 Physeter, genus of mammalia, dentition of XVI 444.

PHYSHARMONICA, XVII 568. Physic, inclusive of Surgery, XIV 448—theory and practice of, ib See Medicine

Physical argument for the existence of God. XXI 186.

- Education, XV 810.

Science See Physics.
GEOGRAPHY, XVII. 569; X. 459
the Alps, II. 623—snow-line, 625 See Snow-line. Andes, III. 127—glaciers, II. 625; X 633—climate of America, II. 673 et seq —Arabia, III 341—Asia, 738—Africa, II. 215—distribution of American forests, 672—distribution of plants, V. 219 et seq—of animals, III 174—the crustacea, VII. 540—of insects, IX 63—of fishes, XII. 329—of reptiles, XIX. 15, 30, n 4, 50—of the Arctic Polar Basin, XVIII 175-greater warmth of the northern than of the southern ocean, II 673modifying influence of climate, &c., on animals, III 173, 174—influence of the ocean on climate, 737. See Climate, Cloud, Cold, Complexion, Evaporation, Heat, River, and the geographical and natural history articles generally

Physicians, XIV. 448—Chinese, VI 585 naval, XVI. 114—Edinburgh College of, VII 114; VIII 400—London College of, VII. 113; XIII 672; its foundation by Linacre, XIV 459, 460; decay of its mfluence, 466—Dublin College of, VIII. 223—diseases of, XIV. 442—qualifica-tions of, for the treatment of mental disease, 538—should be acquainted with surgery, XX 809-are not unproductive

labourers, XVIII. 258
PHYSICS, XVII. 647; XIV. 448—dissertations on physical science, I. 549, 799 -experimental, 800 - different meanings of the word, 9, 10-should be confined to the phenomena of matter, connect to the phenomens of matter, 10—ancient physics, 565—modern, 569—Amstotle on, III. 541—among the Druids, VIII. 185—connection with mathematics, I. 805, 806—relation of, to engineering, 865 - knowledge of,

### PHY-PIC

desirable for the study of theology, XXI182 See Astronomy, Mechanics, Optics, Dynamics, Hydrostatics, Hydrodynamics, Acoustics, Magnetism, Electricity, Heat, &c

Physiognomy, XVII 647-of vegetation in different quarters of the globe, V 223 — phrenological, XVII 561 — 16 garded by the Athenians as an index of character, XX 378

Physiology, XVII 648; XIV 462, 463 sense in which Dr Campbell employs the word, I 9-province of, II 748 biceding of hoises and cattle, 338, 341 -Barthez's works on, IV 481-vital, natural, and animal functions, II 119 John and William Hunter's contributions to, XII 27; XIV 462-benefits it derives from paleontology, XVII 91 of plants, V 65 et seq —Haller's contributions to, XIV 462—aid afforded to natural lustory by, III 172—of the crustacea, VII 537 See Animal Kingdom, Anatomy, Dietetics, Blood, Digestion, &c

Physodon, sub-genus of fishes, XII 328 Physograda, zoophytes, XXI 1001 Physonemus, genus of fossil fishes, XVII

Physophoridæ, zoophytes, XXI 1006 Phytolaccaceæ, nat. old. of plants, V.

Phytomyza, genus of insects, IX. 257. Phyton, in botany, V 141. Phytozoa, V 143

Pubuca, genus of fishes, XII 246. Piabucina, genus of fishes, XII 246 PIACENZA, town in Italy, XVII. 703university of, XXI. 492.

Piaggi (Antonio), XI. 345 Piahaus, birds, XVI. 750 Pia mater, cerebral membrane, III 56,

PIANO-FORTE, XVII. 703, XI 231; XV. 740—IVOIY Keys of, XII 664.
PIANOSA, Island, XVII 705 Plastre, XV 445

Plauni, or Plauly, in Brazil, XVII 705; V. 295.

Plauzite, mineral, XV 124

PIAZZA, town in Sicily, XVII 705. PIAZZETTA (G. Batista), painter, XVII.

PIAZZI (Giuseppi), XVII 705; III 807—astronomical labours of, 808—bis discovery of Ceres, I 835; IV. 67, III. 808-his catalogue of stars, I. 836; IV.

Proa, XVII 705. See Mirandola
—, type, IV. 707; XXI 401, 403—
double, XVIII. 536—casting up of a sheet of, 541

— genus of birds, XVI 764
PICARD (Jean), XVII 705—measurement of an arc of mendian by, I 618; IX. 548-on the earth's annual motion, II 36—his astronomical labours, III 802—editor of the Connaissance des Temps,

- (Louis-Benoit), dramatist, XVII 705

PICARDS, religious sect, XVII. 706; II 128

PICARDY, in France, XVII. 706; X. 276horses of, XI 661

Piccini (Nicolo), XVII 706-on harmony, XV 730—on modulation, 733
PICCOLOMINI (Alessandro), XVII 706.
(FRANCESCO), XVII 706.

PICENUM, IN Italy, XVII 706.
PICENUM, IN Italy, XVII 706
PICERNO, town of Naples, XVII 707.
PICHEGRU (Charles), General, XVII 707;
V. 554, X 82, 87 st seq, 129—death of, 181—his invasion of Holland, XI 579. Picher-Grandchamp on Mesmerism, XX

Pichihucu, Chilian fish, VI. 550. PICKERING, town in Yorkshire, XVII 707. Picking, process in woollen manufacture, XXI, 923

Pickles, making of, IX. 767-adultera tions of, 770.

Pickling timber, XX. 167.

# PIC—PIK

Pico, island, XVII 707, IV 336 Picoides, genus of biids, XVI. 777 Piciopharmacolite, XV 96. Piciophyll, mineral, XV 80. Picrosmine, mineral, XV 80. Pictet (Maic-Auguste), I 943—his Essay on fire, ib -on the radiation of heat, XI 262-his experiments on the reflection of cold, VII 100 -(F J), his works on insects, IX

Pictor (Fabius), XVII 707; IX 460 Picrou, in Nova Scotin, XVII. 707, XVI

PICTS, XVII 707, VI 74: VIII 794: XIX 743-their wais with the Romans, V. 380—Picts' houses, III 421—their dominion in Scotland, XIX 742—conversion of the northern, 744—their dis-

appearance as a people, 1b
PICTURE, XVII. 707—mosaic pictures,
XV 653 See Painting,
PICTURESQUE, XVII 707, IV 553 Picture-writing, Mexican, II 684, 695

Picumnus, genus of birds, XVI. 777. Picus, genus of biids, XVI 774

Piddington (Mi), on cyclones, XIV. 649
Piddington (Mi), on cyclones, XIV. 649
Piddiocks, shell-fish, XV 352
Piece work, hurng by, XXI 678
PIEDIMONIE, town of Naples, XVII 707
PIEDMONIE, principality of, XVII 707—
coms of, XV. 442, 444—chinate of, XII
638, XIX 633—military mauriection in, 655-military character of the Piedmontese, III 655—savings-banks, XIX 674—silk produced in, XX 278

PIERIDES, XVII 708. Pierron (Alexis), on Homer, XI 602 Piens, genus of insects, IX 207 Piens Flora Cordiensis, XII 451, n 6 PIERRE (J H Bernaldin de St), XVII

708-lus tales, XIX 289 D'OLERON, town in France, XVII

(St), island, XVII 708 (St, le Sieur de), on the longitude, XIII 686.

(St), town in Martinique, XVII 708; XIV 822.

PIERRE-LES-CALAIS, town in France, XVII 708.

Piers, in architecture, III 511-suspension, XI 223—timber, 224—in embank-ments, VIII 646—for entrances to rivers, XVI 83

Piers Plowman's Visions, XIII 184. Plesse (M1), on perfumery, XVII 409
Pletermantiburg, in Natal, XV 805
Pletists, German sect, XVII 708—originated with Spener, XX. 505 PIETRA DE FUSI, town of Naples, XVII

PIETRAPERZIA, town in Sicily, XVII. 708 Pietro of Cortona, painter, XVII. 78 PIGALLE (Jean Baptiste), sculptor, XVII.

Pigeaire (Mile ), mesmeric somnambulist, XX 430.

PIGEON, XVII. 708, 638; XVI 798, 794 its flesh, IX. 762—carunculated, XVI 794—great crowned, ib .- hackled, ib . Nicobar, ib —palabolic, ib.—passenger, ib —rock, 793—wood, ib.—carrier, VI 275—dung of, as manure, II. 411 wood-pigeon shooting, XX. 216.

Pignius (Albert); XVII 708 - (STEPHANUS VINAND), antiquary, XVII. 709

Pig-iron, XII 533 et seq. See Smelting. Pigment cells, XVII 650
Pigments. See Colours — Pigmentary principles, in physiology, XVII. 655pigmentary degeneration, 690, 696. Pigmentum nigrum of the eye, III. 43. Pignerol, XVII. 712

PIGNOTTI (Lorenzo), XVII 709. Pigot (Lord), XI. 492; V. 777 Pigs, II 355-breeds and management of, 1b —of Hampshire, XI 204. See Hog.

Pig-tail tobacco, XXI. 296.

Pika, in zoology, XIV. 188. Pike, fish, XVII. 709; XII. 253—its fiesh, IX 764—chemical composition of the

# PIK-PIN

teeth of, XVI 418—angling for, III 158—sea-pike, IX. 764—saury-pike, XII 264

Pike, Roman weapon, III 633
Pila, Russian town, XIX 728
PILAO-ARCADO, town in Biazil, XVII 709 Pilasteis, in architecture, III 478, 487,

511—in joinery, V 752 PILATE (Pontius), XVII 709; XII 772 his alleged letter to Tibelius, XII 761. PILATRE DE ROZIER (J François), XVII. 709; II 175, 177—death of, 179

PILCHARD, XVII 709 . XII 286, IX 763

—used as manue, VII 407.
Pilchard-fishery, IX. 643—in Cornwall,
VII 408—England, VIII 727 PILCOMAYO, river, XVII 709, 647, IV.

823. Pile of Volta, I 964—his description of it, ib -history of, 966-theory of, 978 its fitness for telegraphs, XXI 99its properties and effects, 609 et seq

- in heraldry, XI 330—funeral-pile. X 344 Pileolus, fossil mollusks, XVII 109, 111.

Pileoma, genus of fishes, XII 277.
Piles (Rogei de), XVII 709—his account of a blund portiant-painter, IV 781.

- stakes for foundations, XX 722of non, 723-screw, 1b -pile-engine, 722

PILEUS or Pileum, XVII 709 m mushrooms, V 146, 147 Pile-worms, XV 353. See Teredo Pilgrim tax, abolition of in India, XIII.

Pilgiimage to Mecca, XIV. 379tomb of the prophet Hud, III 858—to Jerusalem, XII. 734—pilgramages of the Hindus, XI. 469

Pilkington on Carlo Dolci, VIII 92 PILLAR, XVII 709, III. 511. See Column, Towers (Round).

— Saints, XX. 785. PILLAU, town in Prussia, XVII 709. PILLEEBHEET, town in India, XVII 709 Pillersdorf (Baron), on the state of Austria, IV, 306

Pillischer (Mr) his microscopes, XIV.

PILLORY, XVII 710, XVIII 575. Pillow-lace, XIII 142 Pillowed, in architecture, III 512. Pilnitz, treaty of, V 540, X 61.
Pilori, in zoology, XIV 181.
Pilor, XVII 710

Pilot-fish, XII 294 Pilpay, Hindu author, IV. 719-his Indian fables, XIII 78. PILSEN, town in Bohemia, XVII 710.

PILUM, XVII 710; III. 633. Pimeleptorus, genus of fishes, XII, 802. Pimelia, genus of insects, IX 129 Pimeliama, tribe of insects, IX 129

Pimelite, mineral, XV 84. Pimelous, genus of fishes, XII 202.
Pimento, XVII 710, V 192; XII 679,
681—oil of, XVI. 496—imports of, VIII.

Pimico, suburb of London, XVII 710 Pimpla, genus of insects, IX 189. Pin (M.), his hydraulic experiments, XII. 113.

Pin, in lace making, XIII. 142. Pin-wheels, XIV. 396 Pinaceæ, nat. ord of plants, V 209.

Pinaster, XVII. 757. PINCHBECK, XVII. 710; V. 276; XVIII.

Pinchincha, remarkable halo observed

on, VII 411. Pinchinin, Algerine admiral, II. 570. Pincian Hill, XIX. 356

Pincon (Vincent Yanez), Brazil discovered by, V. 279-entered the Rio de la Plata in 1508, II. 699. PIND-DADUN-KHAN, town in India, XVII.

PINDAR, XVII. 710-his poems, XVIII.

102. Pindaree war, XL 508; XIV. 120.

PINDEMONTE (Ippolito), poet, XVII. 712. PINDUS, mountain, XVII. 712; XI. 10,

### PIN-PIP

13-mountain chain of, XVII 596; XXI. 376-height of, XVII 642 Pine, order of plants, V 209 Pineal gland, III 54 Pine-apple, order of plants, V. 212-culture of the pine-apple, XI 780-fibre of, XXI 782

Pineau (Severin), on legal medicine, XIV.

Pine-barrens, XVII 627

Pine-tiees, XVII 754 et seq —pistillate flower of, V 184—propagation of by seeds, XVII 767-Norfolk-Island pine, III 396, V 209, XVI 291—anancaman VI 549—Kaunc on Cowdie, V 209— Norwegian, XVI 323 — Californian, XVII 626—Himalayan, XI 444—pine timber, XXI 274, 275—scasoning of, XX 168, 170—stiength, 171 See Fn, Timber

Pinel (M), on the connection of insanity with liability to see apparitions, III 320-his manner of treating insanity, XIV 528-on cietins, VII 496

PINEROLO, XVII 712 Pine's edition of Horace, IV 707 PINGRE (Alexandre - Gui), astronomer, XVII 712

Pinguipes, genus of fishes, XII 273. Pinguite, mineral, XV 90 PINION, in ineclianics, XVII 713

PINION, in ineclianics, XVII 713
Philto, mineral, XV 89
Phik, dyeing of, VIII 317
—, plant, V 184—culture of, XI 754
—sca-pink, V. 203. XI. 748
PINKAFELD, town in Hungary, XVII 712

Princerios (John). XVII 712-on Bat-bour's Bruce, IV 436-on Dunbar's poetry, VIII 247, 250-on the Scottish language, 798, n 3—on the feudal system, 1X 520—on the Sestertus, XV 439, n 10

Pinkey, baltile of, XIX 778. Pin money, XVII 713 Pinna, genus of molusks, XV 348-fossil, XVII 106

PINNACE, XVII. 713; IV 800. PINNACLE, XVII. 713; III. 512, 480 ct

Pinnata, family of mollusks, XV 400. Pinnigrada, echinodorms, XXI. 984 Pinning, in carpentry, V. 747 Pinnipedia, tribe of mammalia, XIV. 153. Punnotheres, genus of crustacea, VII. 541. Pinophilus, genus of insects, IX. 103. Pins, XVII 713—manufacture of, at Birmingham, IV 732

PINSK, town in Russia, XVII. 714. Prist, town in Kussa, XVII. 714.
Pin-tails, buds, XVI 818
Prittell (Bacsao), architect, XVII. 714.
Pinto (General), VI 553.
(Mondes), his Perigrinagam, XVIII.

PINTURICCHIO (Bernardino), XVII 714. Pinus, XVII. 714. See Pine Trees Pinzon (Martin Alonzo), II 699. Probert on combustion, XI 114 Probertso, in Tuscany, XVII. 714 Piombo (Fra Sebastiano del), XVII. 714.

See Sebastiano Piophila, genus of insects, IX 253. PIOVE-DI-SACCO, town in Italy, XVII. 714. Prozzi (Hesther Lynch), XVII 714—Dr Johnson's intimacy with, XII 800. Pipa, genus of reptiles, XIX. 81.

PIPE, musical instrument, XVII. 714pipes of an organ, XVI. 710. Pipe-office, XVII. 714.

Pipes, transmission of sound through, II. 99-boring of stone and wooden, V. 44, 45-motion of water in, XII. 111, 131, 133, 136—pressure upon, by the water flowing through them, 135—Bramah's patent for water-pipes, V 274—for house drains, 735; VIII 128—for draining, 184 — conduit pipes, in gas making, X. 414—gas-pipes, 420—cast-iron pipes for conveying water, III. 887— motion of air in I. 726; XVIII. 61— stronger than solid rods containing the same quantity of matter, XX. 766. See

Pipo-clay, XV. 83, 142; XVIII 488.

#### PIP—PIT

Pipe-fishes, XII 314 Piperaccæ, nat ord of plants, V. 207region of, 228; XVII 628. Pipers, XVII 714 Pipestone, XV 84 Pipit, bild, XVI 757

Pipiza, genus of insects, IX 239.
Pipia, genus of biids, XVI 757
Pippul, tree, IX 537—worshipped by the

Buddhists, X 723 Pipunculus, genus of insects, IX 242
Piracy, XIII 285, 288—Algerine, II 568
ef seq., IV 431—Berbers addicated to,
XV 595—efforts of the Hanseatic League to extupate, XI. 214. See Corsan, Pirate.

PIRFUS, port of ancient Athens, XVII 715, IV 171, 174—improved by Themistocles, 200

-, seaport of modern Athens, XVII

Piran Round, primitive theatre of, XXI 164 PIRANESI (G. Battista), engraver, XVII

Pirano, Austrian town, XVII 715

PIRATE, XVII 715; V. 709; VII 416 See Phacy Pirene, sping, VII 367

PIRMASENS, town in Bavaria, XVII 715 Pirna, in Savony, XVII 715. Pirogue, cance, IV 800 Piron (Alexis), poet, XVII 715

PIR-PANNAL, mountain range, XVII 715 PISA, XVII 716—cathedral of, III 447, 517—commerce of, VII 186—a rival of Genoa, X 433 — school of pairing, XVII 60, 61—university of, XXI 492 — (LEONARDO), XVII 717; II 483.

Pisander, IV 207.
Pisano (Andrea), sculptor, XVII 717;
XIX 860

\_\_\_\_ (NICCOLA), sculptor, XVII 717, 716, XIX 860.

(N and G), painters, XVII 61 Pisamum, ancient town See Pesaro Pisces, constellation, IV. 80

PISCINA, XVII 717 PISEK, town in Bohemia, XVII 717
PISIDIA, in Asia Minor, XVII 717—coins of, XVI. 377.

Pisidium, genus of mollusks, XV. 350 PISISTRATUS, XVII 717-State of Athens under, IV. 100-his government and character, 196, 197—first collected the poems of Homer, XI 598. Pisodus, genus of fossil fishes, XII. 338;

XVII. 129.

Pisolite, mineral, XV. 92, 147. Pisolitic chalk, XV 211. Pison, genus of insects, IX 196. Pisoodonophis, genus of fishes, XII. 223.

Pissophane, mineral, XV. 101 Pistachio nut, V 190; XVI 395-its oil XIII 169.

Pistazite, mineral, XV. 85. Pistiacea, nat ord of plants, V 214.
Pistiacea, nat ord of plants, V 214.
Pisticoto, town in Naples, XVII. 718.
Pistil, in botany, V. 117, 129—transformations of, 133

Pisroja, town in Tuscany, XVII. 718. Pistole, XV 441, 442. Pistolograph, XX. 691.

Pistols, manufacture of, XI. 100—electri-cal, VIII. 626

Pistomasite, mineral, XV 92. Pistomasite, mineral, X v vz.
Piston, in pump-work, XVII 718—comparative motion of two pistons, XIV.
386—of steam-engine, XX 589 et seq.—
velocity of, 645—in merchant steamers, and Government screw-steamers, 616high speed now used, 655.

Pistosaurus, fossil reptiles, XVII 144
Pitard, French surgeon, XX. 816.
Piroanen Island, XVII. 718; XVIII. 282
—inhabitants of, settled in Norfolk
island, XVI. 291.

PITCAIRNE (Archibald), physician, XVII. 719; XIV. 460.

Pitcaithly, in Perthshire, XVII. 457. Price, XVII. 719; XVI. 100; XXI. 21—specific gravity of, XII 88—mineral, IV. 786—as a polisher of specula, XXI.

# PIT—PIU 136-pitch-lake in Trinidad, XVI. 100,

XVII 602, XXI 352 Pitch, of a roof, XIX 873. Pitch-blende, XV 111 Pitcher-plant, V 93, 205— -analysis of the water in the pitcher, 104—in Ceylon, VI 394—of Java, XII 704 —, order of plants, V 205 Pitches, in mining, XV 224 Pitching of a ship, XX 153, and n 1pitching and scending, 161 Pitch-oil, X 433 Pilch-pine, specific gravity of the wood,

XII S9 Pitchstone, XV 72, 134
Privia, in Sweden, XVII 719
Prih of plants, V SJ; XXI 267 Priliccia, genus of mammalia, XIV 144 Pitheons, genus of mammaha, XIV 188 Pithiviers, town in France, XVII 719 PITHOU (Pierie), XVII 719

Prrisous (Samuel), philologist, XVII 720 -, mathematician, X 505-on the arithmetic of sines, II 547.

Pitkin on the imports of the United States, IX 406

Piror (Henri), XVII 720—his theory of centres, VI 373—his tube, XII 142 on hydraulies, 143, XIX 186-on the strength of materials, XX 757, 759. PITS (John), biographer, XVII 720
PITT (Christopher), poet, XVII 720
(WILLIAM), Earl of Chatham, XVII.

721-his administration, V. 463 et seq - resignation, 465 - created Earl of Chatham, ib -his icappearance in Parhament, 478-his plan for terminating

the American war, ib

(William), son of the preceding, XVII 727—his plan of parliamentary reform, V 507, 515—his administration, 511—India Bills, ib., 513, XI. 497—refusal to resign, V 511—plan of a commercial union between Great Britain and Ireland, 516-sinking fund, 518, X. 329, 339 -commercial treaty with France, V 522; VII. 195—on the regency question, V 531, 532—his administration in reference to Reland, 533 on the slave trade, ib ; XX 322-on mereasing the army, V 525—his polley in reference to the French revolution, 536-on the corporation and test acts. ib .- his bill for regulating the government of Canada, 537-on Mr Grey's motion for parliamentary reform, 542, 543, 549—his support of the war with France, 548, 552, 556—bill to increase the navy, 562-duel with Mr Tierney, 563 — income-tax, 566 — proposal of union between Britain and Ireland, 566. 572-on the expediency of continuing the war with Bonaparte, 571-end of his administration, 575—his character as a statesman, 576—on Catholic cmancipation, 578, 624-on the peace of Annens, 586-his return to power in 1803, 597his death, 599—payment of his debts, ib—financial measures, VII. 190—blundering policy in 1805, X 197—his proposed tax on coal. XII. 573—duty on tea reduced by, XXI 71.
Pitt-Diamond, VIII. 3, 4; XVII. 721.
Pitta, genus of birds, XVI. 753.

PITTACHIS, Greeinn sage, XVII. 744. PITTENWEEM, XVII. 744. Pittierte, mineral, XV. 101. Pittinerz, mineral, XV. 111. Pittosporacem, nat. ord. of plants, V.

Pritis (William), XVII. 745.
Pritisburgh, in Pennsylvania, XVII. 745
—climate of, 395—glass manufacture, ib.—commerce, 397.

Pity, I. 388.
Pitylus, genus of birds, XVI. 761.
Piuna, town in Peru, XVII. 746, 474.

Pros I, Pope, XVII. 746.

11., XVII. 746.

11., XVII. 747.

11., XVII. 747.

VI. XVII. 747.

VI. XVII. 747.

# PIU—PLA

Prus VII., XVII 747—Jesuitasm restored by, XII 736

VIII, XVII 747; XII. 656.

IX, XII 656—his retirement to

Gaeta, 668—and return, 659.
Prvots, friction of, XIV 406—Coulomb on the friction of, VII. 464—Schieles' pivot, XIV. 406

Pixii (Hippolyte), on magneto-electricity, VIII 582 - his magneto-electric machine, XXI 646.

Pizarro (Francis), II. 596-his conquest of Peru, XVII 463-Lama founded by, XIII. 486.

Pizzo (Il), Itahan city, XVII 747 Placeus (Vincent), on anonymous books, IV 711

Placenta, III 72; XVII 688.

—, in botany, V 130 PLACENTIA, XVII, 747

, in Sparn, XVII 748. Placodus, fossil reptiles, XVII 145 -, genus of fossil fishes, XII. 337;

Placoganoidei, fossil fishes, XVII 120. Placoid, order of fishes, XII. 217-fossil, 333, 339

Placuna, genus of mollusks, XV 348 Placunopsis, fossil mollusks, XVII 105

Pladda, Island, VI 28. Plagiany, XVII. 748.

Plagiarism, XVII. 748-charges of, against Middleton, IV. 637; Coleridge, VII 111: Paley, XVII, 204, n.; XVI 263; Storne, XXI 603 Plagianlax, fossil mannuals, XVII. 161.

Plagionite, mmeral, XV 119.

Plagiostoma, fossil mollusks, XVII. 106. Plagiostoni, family of fishes, XII. 528—fossil, 340; XVII. 116.
Plague, XVII 748—at Aleppo, II. 463—

at Athens, IV. 204-in Egypt, II. 22; VIII 422-England, IX. 320-London, V. 423; XIII 659; effect of, on the religious feelings of the people, 1, 461—at Birmingham in 1665, IV. 729—Edin-burgh, VIII 201—Glasgow, X. 646— Marseille, XIV. 316-Milan, XV. 2-Perth, XVII. 452-Rome, XIX 344-Black Death in 14th century, XXI. 944 and 2. 2.

Plagues of Egypt, design of, I. 467—the plague of blood supposed to have been produced by infusoria, III 210

Plagusia, genus of fishes, XII, 272. Place, fish, IX 764. Plaiding, XIX. 805.

Plaine, a district in Vendée in France, XX1, 534.

Plans-maritime plain of Syria, XX. 902 -of Bagota, IV. 808-of northern and eastern Europe, XVIII. 602; XVII. 609 — among the Himalayas, XI. 441—in China, XVII. 610—India, ib. — Java, XII. 703.

Plakodine, mineral, XV. 116. PLAN, XVII. 752—in architecture, III. 512

Plana (M.), on electricity, VIII. 533-his lunar theory, I. 825-his skill as a calculator, 826.

Planaria, zoophytes, XXI. 976. Planeer, in architecture, III 512. PLANE, in geometry, XVII. 752; X. 592 properties of, 550—in ——eharts, VI. 420. -in joinery, XII. 807.

order of plants, V. 208. Plane-trees, XVII. 765 -wood of, XXI.

278.

PLANET, XVII. 753, IV. 8, 51, 89—Herschel's observations on, I. 840—abservation of the planets, II. 38—optic equations, 50—acceleration, 74—perturbations, I. 811; III. 809; IV. 61—invariability of mean distances, III. 811—motions, IV. 4, 51—interior and superturbations, IV. 4, 51—interior and superturbations, IV. 4, 51—interior and superturbations. rior, 52-stations and retrogradations, ib.—effect of the earth's motion on their appearances, 54—their orbits, 57, 62—transits over the sun's disk, 62 constitution, magnitude, and rotation, 65-relation of the numbers which express their distances from the sun,

# PLA-PLA

73-forces which retain them in their orbits, 97—small planets between Mars and Jupiter, 91-forces which disturb their elliptic motion, 102-Euler on the inequalities of their motions, IX. 373disturbance produced by their mutual action, IV. 106-their disturbing effect on the orbits of comets, 107-stability of the planetary system, 107, 109— Drudical knowledge of the planets, VIII. 186-Eudoxus' views of, III 789 Planetary theory, I 811-discovery of new planets, or asteroids, 859; of secondary planets, 860—their satellites See Satellites

- Machines, XVII 753. Planiceps, genus of insects, IX 195. Planimeter, XIV 415 Planing machine, Bramah's, V. 273-

of the planing machine, I 879 Planipennes, family of insects, IX 177. PLANISPHERE, XVII 753; III 791.

Plank, in joinery, V. 750—planks of a ship, XX. 187, 188. Plano-convex and plano-concave lenses,

Planorbis, genus of mollusks, XV. 374-

fossil, XVII 111.

PLANT, XVII. 753 — what constitutes a plant, 91 — distinctions from animals, III 168; II. 748-organic constituents of, 874; V. 94; morganic, II 374, 384, V 96—changes in the food of, during their growth, II 382—elementary tissues, V 65—integumentary system, 74—nutritive organs, 75—reproductive organs, 112—inflorescence, ib —sexuality, 152—propagation, 167, XI 693, 694, 702—temperature, V. 169 XI 693, 694, 702—temperature, V. 169
—luminosity, 169, XIII 458—electricity of, V. 170; VIII. 570—effects of electricity upon, 603, XXI 635—classification of, V 174, 176—arrangement and characters of the natural orders, 180—geographical distribution of, 219, 222; XVII 624; in Britain, V. 726—specific centres from which plants have been spread. XVII. 625—total number known spread, XVII. 625-total number known. spread, A VI. 1020—1014 number Khown, ib—families characteristic of different zones, 626—regions of, V 227, XVII. 627—substances poisonous to, V. 175—natural and artificial classification of, v. 176, of, both indicated by Cæsalpinus, VI 56colours of, VII. 152, 153—green colours of, XVI. 693—their defence against excessive cold, XI. 262—species yielding narcotico-acrid poisons, XIV. 439 — effects of light on, XIII 459 — their tendency to increase in a geometrical progression, XVIII. 838-nature-printing of, 555—number found in Scotland, XIX 796 See Botany and the Geo-

graphical articles generally. Plantade on the barometer, IV. 455. PLANTAGENET, XVII 758

Plantaginaceæ, nat. ord. of plants, V. 203 Plantaginaceæ, nat. ord. of plants, V. 203 Plantain tree, V. 211—fibre of, XXI. 783. Plantain-eaters, birds, XVI 784 Plantations See Forests, Woods, Plantations

ing, Timber.

Plantigrads, XIV. 153; XVII. 681—their mode of walking, III. 88. Planting, XVII. 754—of fruit trees, XI 695, 704—of timber trees, XXI 268
PLANUDES (Maximus), Greek monk, XVII

776, III 580 Plasma, mineral, XV. 69; II. 232; VI 67 PLASSEY, in India, XVII. 776—battle of, XI. 484

PLASTER, in pharmacy, XVII 776—surgical, XX 823

gicai, AA. 523

OF PARIS, XVII. 776—modelling with, XV. 298, 294; XIX 868—casting with, IV. 828—its composition, XI. 172—paper adulterated with, XVII. 260 its use in stereotyping, XVIII. 550. See Gypsum.

Plasterer's work, V. 741-measurement

Plastic clay, XV. 212; XVIII. 439. Plat (Sir Hugh), on manures, II. 256—his method of making coal balls, X. 318 and

# PLA—PLA

PLATA (La), XVII 776; II. 675, 705—climate of, 673—revolution in, 701 map of, VI. Plate

—— (RIO DE LA), XVII 782, 603; V
726—navigation of, II 675
PLATÆA, or Platææ, XVII 782—battle of,
IV 200; XX 501—festival in honour of

Jupiter celebrated at, VIII. 631 Platalea, genus of birds, XVI 800. Platanaceæ, nat ord. of plants, V 208 Platax, genus of fishes, XII. 302—fossil,

Plate, stamp on, XIV 290 Plateau (M), on vision, XVI. 550. -, Eastern, ın Syrıa, XX 903 Plate-glass, X 665 Platemys, fossil Chiloman, XVII 153 Platen-zee, IV 393

Plates, in heraldry, XI 325. Platessa, genus of fishes, XII 272 PLATFORM, XVII 783-ofrailway stations,

XVIII. 766, 777 et seq PLATINA, or Platinum, XVII 783; XV 66, 113, VI 499-oxides of, ib -mines of, XV 236—its use with the blow-pipe, IV 791—specific gravity of, XII 88 distribution of, XVII 622—its fitness for a pyrometer, XVIII 705—its use in colouring porcelain, 444—art of rendering malleable discovered by Wollaston, I 972; XXI. 900-produce of, in Russia, XIX 542, 543—its conducting power for electricity, XXI 621-its effect on the electric current, 623 - Children and Groves' experiments on wire of, 626, 627 -decomposing power of spongy, 630 Platinoids, family of metals, XVII 622

PLATING, XVII 783—of copper, VII 351—voltaic, XXI 637 Platinx, genus of fossil fishes, XII. 347 PLATO, XVII. 783-speculations concern ing the Trinity, I 516, n 2-his system of optimism, 126, 127—philosophy of, 816, 817; III 538, 547, 555, 570—taught the possibility of antipodes, 277-on the soul and its transmigrations, 809; XIV 628—his style, III 571—his astronomy, 789—on beauty, IV. 537—his account of the island Atlantis, 177—on the dances of the ancients, VII 645—his school of geometry, X. 498—his esoteric and exoteric doctrines, IX 332 on optics, XVI. 521-his supposed opinions on universals, 284-his ethical works, XV. 539-philology advanced by, XVII. 518—his admiration of Socrates, XX 379-does not give an exact portrait of him, 385, 402-his account of

sius of Syracuse committed to his care, PLATOMETER, XVIII 1; XIV. 415. PLATON, archbishop of Moscow, XVIII 1. Platonists, come sections apparently discovered by, VII 249—their opinion of brutes, V 700—on vision, XIII 449 speculations regarding the doctrine of

the last days of Socrates, 393-Diony-

the Trinity, XXI 195.

(New), II 723.

Platte, river, XV 281.

Platten-see, lake, XII 10.

Plattes (Gabriel), II. 257. Platting, distinguished from weaving, XXI. 780.

Plattnente, mineral, XV. 111 Platt's combing machine, XXI 924 PLATTSBURG, in New York, XVIII 1. Platyacanthus, fossil fishes, XVII 117 Platycephala, genus of insects, IX 255.

Platycephalus, genus of fishes, XII 281. Platycercus, genus of birds, XVL 781. Platycrinus, fossil echinoderms, XVII. 98

Platidactyli, reptiles, XIX. 35 Platygnathus, genus of fossil fishes, XII.

Platypeza, genus of insects, IX. 242. Platypizine, family of insects, IX. 242. Platypterix, genus of insects, IX. 214 Platypterus, Egyptian deity, XI. 386.
——, genus of fishes, XII 307.
Platypus, Duck-billed, XIV. 193.
Omithorynchus.

# PLA-PLE

Platypus, genus of insects, IX. 142 Platyrhina, genus of fishes, XII 327 Platyrhynæ, mammals, dentition of, XVI 455

Platyrhynchus, genus of birds, XVI 749 Platysoma, family of insects, IX 143, 253 Platysomus, genus of fossil fishes, XII. 334; XVII 125

Platystoma, genus of fishes, XII 261. Platyura, genus of insects, IX 228. PLAUEN, in Saxony, XVIII 1
PLAUTUS, XVIII 1, XVII 211

dies of, VIII. 141, 142-sun-dials in his time, VII 775—poetry of, XVIII. 104 Player See Actor

PLAYFAIR (John), XVIII. 3—his dissertation on the progress of mathematical and physical science, I 547—character and subjects of that dissertation, 802remarks on his assertion that Galileo was the first who maintained the law of continuity, 258—his remarks on the characters of Hutton and Black, 928 on the mathematical and astronomical knowledge of the Hindus, II 488; III 786-on physical astronomy, IV 96on barometrical measurements, 465the point where a river ends and a firth begins, IX 600-on the origin of Por-18ms, X 505—on magnetic curves, XIV 46—his illustrations of Hutton's theories, XII 61-his character and merits, I 802, n —on Sir H Davy's safety lamp, 971-on Prof Robison's lectures, XIX 238

(Dr Lyon), his report on coal for the steam navy, X 319—on atomic volumes, VI 449—instances of ignorance of minerals related by, XXI 321

Playhouse, XVIII. 8 See T Playte, kind of ship, XX. 123 See Theatre. Plea, genus of insects, IX 168.
Pleading, English, VIII 789.
Pleasure, Aristotle on, III 561—relative

value of different kinds of, VIII. 25-Epicurean notions of, IX. 273-how far the pursuit of, consistent with morality, XV 573. See Happiness

PLEBEIAN, VIII. 8-Roman plebeians. XIX 296 Plecoglossus, genus of fishes, XII 246.

Plectognath, or Plectognaths, order of fishes, XII 312, 313 Plectrolepis, genus of fossil fishes, XII 334; XVII 125

Plectrophanes, genus of birds, XVI 760 Plectropoma, genus of fishes, XII 223, 276

PLECTRUM, XVIII 9. PLEDGE, XVIII, 9

PLEIADES, in mythology, XVIII 9.
\_\_\_\_\_\_, constellation, XVIII 9, I. 842, n Pleione, genus of annelides, IX. 297. Pleiocene, in geology, XVII. 637. See Phocene.

Pletonemus, genus of fossil fishes, XII. 345.

Pleastocene period in geology, XV 215; XVII 637—British rocks of the, XV 215; foreign, 217—geographical distribution of the mammals of, XVII. 173 Plenitude of stars, I. 844 Pleochroism, in minerals, XV 58 PLEONASM, in rhetoric, XVIII. 9

Pleonaste, mineral, XV 87 Plesonen, town in Prussia, XVIII 9 Plesiops, genus of fishes, XII 288. Plesiosaurus, XVII. 146, 147-bones of,

TTT 89. Pletho (Georgius). See Gemistus
PLETHORA, XVIII. 9—in the domestic
animals, XXI 574.

Pleura, II. 838. Pleuracanthus, genus of fossil fishes, XII 840; XVII 117

Pleurenchyma, V. 69. Pleurisy, in animals, XXI 578. Pleuronectes, genus of fishes, XII. 225-fossil, XVII. 345.

Pleuronectidæ, family of fishes, XII. 271, 272—fossil, XVII. 128 Pleurophorus, fossil mollusks, XVII. 105, 107.

# PLE—PLU

Pleurophyllidia, genus of mollusks, XV.

Pleurosternon, fossil tortoises, XVII 153 Pleurosthotonos, disease, XVII 700 Pleurotomaria, fossil mollusks, XVII 111. Plexus, in anatomy, II 812 Phableness, combination of strength with, in beams, XX 767

PLICA POLONICA, XVIII 9 Phcatula, genus of mollusks, XV. 348—fossil, XVII 106

Plicipennes, family of insects, IX 180

Plinian, mineral, XV 115.

Plinian Secundus (Caius), or Pliny the Elder, XVIII 9—on agriculture, II 250—on alumen, 636—on sal ammoniac, 720-on ants, III 261-on dew, VII 765-on bees, IV 587-on the Druids, VIII. 183 et seq —on calico-printing, 314 on the preservation of timber, 212on geography, X 468-on the remora, XII 270—on irrigation, 622—his natural history, III 549, n 11, XIV 123; XVII. 214—Hardoun's edition of it, XI. 226; H Barbarus's emendations of, XVII. 522-on ornithology, XVI. 725on painting, XVII 51 et seq —on the papyrus, 247—on the pearl, 356—his account of a meteorolite, XIV 629—on ancient sculpture, XIX 843 et seq -on the silk-worm, XX 286-on soap, 365on the boundaries of Syria, 901—on the tides, XXI 250—on ancient vines, 882 PLINIUS CAECILIUS SCOUNDUS (C), or Pliny the Younger, XVIII 12-his letter to Trajan about the Christians, VI. 640; I 493, n—on hunting, XII 32—Melmoth's translation of his letters, XIV 485—his letter to Quintilian, XVIII. 737—his notices of Suctonius, XX 787, 788-on Tacitus, XXI. 2, 3.

PLINTE, XVIII. 13; III 512 Plinthite, mineral, XV. 83. Phocene period in geology, XV 214—flora of, V. 237—insects of, XVII 103—fossıls, 637.

Pholophus, fossil mammals, XVII 162,

163 Phopithecus, fossil apes, XVII 167 Phosaurus, fossil reptiles, XVII 148.

Ploas, genus of insects, IX 234 Ploceus, genus of birds, XVI 760. Plock, in Poland, XVIII 13. PLOERMEL, in France, XVIII. 13. Ploiaria, genus of insects, IX 163 Ploiotribus, genus of insects, IX. 142. Plombgomme, mineral, XV 106 PLON, town in Denmark, XVIII. 13 PLOT (Dr Robert), XVIII 13

PLOTINUS, philosopher, XVIII. 14, 866; XII 194; XVII 282. Plotosus, genus of fishes, XII. 220, 260,

263 Plotus, genus of birds, XVI 814. PLOUGH, XVIII 15; II. 270, 271—substitution of grubbers for, 290-subsoil-

plough, 271. Ploughing, II. 286.
Plovers, birds, XVI. 797—shooting of, XX 216.

PLOWDEN (Edmund), XVIII 15 Plowman (Piers), vision of, VIII 792.
PLUCHE (N Antoine), French writer. XVIII. 15

Plucker (Prof.), on the influence of electromagnetism on the axis of crystals, I 981; XVI. 675.
Plum, V. 191—culture and varieties of, XI 711, 712

Plumbaginaceæ, nat ord. of plants, V.

Plumbago, XV 128-pencils of, XVII. 875-in Ceylon, VI. 893-Cumberland, VII 577; XV 243, n See Graphite.

Plumbers' work, in building, V. 755—their extortionate charges, 756. See

Plumbic acid, VI. 497. PLUMB-LINE, or Plummet, XVIII. 15; XXI. 347

Plumbocalcite, mineral, XV. 92 Plumbostib, mineral, XV. 119. Plume-nutmeg, order of plants, V. 204.

### PLU—POD

494, 495 Plumosite, mineral, XV 119 Plumule, in botany, V 141 Plunger pole pump, XII 176 PLUNKET (Wm Conyngham), Lord Chancellor of Ireland, XVIII 15—his bills for Catholic emancipation, V 631—his advocacy of the Catholic claims, 638, 639

PLURAL, in grammar, XVIII 16; X

Plusquam-perfect tense, X 766, 767
PLUTARCH, XVIII 16—the notion of centrifugal force implied in a statement of his, I 568-on the Amazons, II 651his character of the Athenians, IV 211 on cold, VII 99-on virtue, XV 558 -his notices of ancient sculpture, XIX 855 et seq —on the alleged poverty of Socrates, XX 376, n. 3—Langhorne's translations of his Lives, XIII 188, 184

PLUTO, XVIII 17, XI 179 PLUTUS, god of riches, XVIII 17. Plyctolophus, genus of birds, XVI 783 Plymhmon, XV 518

PLYMOUTH, XVIII 17—breakwater at, V 306—fortification of, 516, 517—diving-bell used at, VIII 66—dockyard of, 84 -victual establishments, ib -hospital, ib -harbour, 721-harbour of refuge at, XI 222-tide at, XXI. 249

a town in Massachusetts, XVIII 21; XIV. 341, XX 432

group of rocks, XV. 199. PLYMPTON, two towns in Devon, XVIII

PLYNTERIA, XVIII 21 Pneumatic process, in sugar making, XX

PNEUMATICS, XVIII. 22—invention of the air-pump, I 596, X 79—experiments on the passage of air through pipes, I 726-method of determining the relative density of any gas, 727-on the escape of air and vapour through an aperture, ib —experiments on the density of the air at different heights, 729—explanation of Bouguer's rule relative to the barometrical measurement of mountains, 780-experiments of De Luc, 780 -vacuefying apparatus in the feet of certain animals, III. 101; IX. 228—Dr Beddoes's Pneumatic Institution, IV. 566-Pneumatic Power Transmitter, XIV. 386—Hero of Alexandria's work on, XX 573 See Air-pump, Atmosphere, Barometer, Hydrostatics

Pneumodermon, genus of mollusks, XV

Pneumogastric nerve, III. 57
Pneumonia, in the domestic animals,
XXI 573—in Saxony, XVIII 666. Pneumora, genus of insects, IX. 158. Pnyx, in ancient Athens, IV. 169

644; XVII 242, 647; XIX 633—its inundations, XII 70—mouths, XVII. 241—tributaries, 242—deposition at the mouths of, XIX. 207-velocity of, 199bed, 206

Pochards, birds, XVI. 817. POCHETTI, XVIII 88. See Barbatelli PockLington, town in Yorkshire, XVIII.

Pocock (Edward), English divine, XVIII

POCOCKE (Richard), bishop, XVIII 89— his description of an aqueduct at Jerusalem, III. 838

Podabrus, genus of fishes, XII. 282. Podactiniaria, zoophytes, XXI. 1005. Podahrus, XX 809. Podargus, genus of birds, XVI. 759. Podgoritza, in Turkey, XVIII. 89.

Podiceps, genus of birds, XVI. 809. Podisma, genus of insects, IX. 160. Podium, genus of insects, IX. 195. - in architecture, III. 512. Podley, fish, XII, 269.

Podoa, genus of birds, XVI. 809. Podocys, genus of fossil fishes, XII. 343.

# POD-POI

Plummer (Mr), his flax-machines, XIII. Pododus, genus of fossil fishes, XII 335; XVII 125

Podolia, or Podolsk, in Russia, XVIII

Podontia, genus of insects, IX 149 Podophthalma, crustacea, VII 538, 540 Podostemonaceæ, nat ord of plants, V

Podura, genus of insects, IX 261 Podurellæ, family of insects, IX 261. Pœcilia, genus of fishes, XII 252 Peculophis, genus of fishes, XII. 232. Poculopleuron, fossil reptiles, XVII 152 POE (Edgar Allan), poet, XVIII 89 POELEMBURG (Cornelius), painter, XVIII

Poepping (Dr) on Peru, XVII. 470, 472 Poerner's processes for dyeing scarlet, VIII 289

Pæstum See Pæstum

Poetics, Aristotle's, III 559. POETRY, XVIII 91, XV 23, 31—Chinese, VI 578—Persian, XVII 429—Sir Walter Scott's, XIX 823—had the Egyptians poetry? XI. 428—character in, VI. 420-definition of, by D'Alembers, I 4-by Bacon, 33-language of, IV. 548—comparisons in, VII 218—no French language of, VIII 155—suggests musical ideas, XV 738—relations be-tween it and persuasive eloquence, XIX 137.

Poey (M.), his work on the lepidoptera of Cuba, IX 18

Poggio, XVIII 127 See Bracciolini Pogonias, genus of birds, XVI 779.

- genus of fishes, XII 284, 285 Pogonocherus, genus of insects, IX 146. Poictiers. See Poitiers

Poignard on magic squares, XIII 810 Poilly (François), engraver, XVIII 127. Poinsot (M) on rotation, I 825—his theory of statical couples, 1b —on the precession of the equinoxes, XVIII 459.

OINT, XVIII 127 - motion of, in mechanics, XIV. 384 - motion of two points, 387—dry point, in engraving, VIII. 799, 803—action of points in electricity, 553 See Punctuation, Astronomy, Geometry.

Point-blank, in gunnery, XI 104 Point-A-Pitre, XVIII 127; XI. 72 Point-de-Galle, in Ceylon, XVIII 127; VI 890, 893; XXI 27.

Pointed architecture, III. 445, 440, 456, 479, 489, 516, 517—first period of, 480 —second period, 481—third period, 482 origin of, XX 710.

Pointer-dogs, XX. 218. Pointis, a bucaneer, V 713 Pointiso, Italian town, XVIII. 127.

Poison, XVIII. 127-metallic poisons, XIV 432—vegetable, 436—animal, 430—earthy and alkaline, 434—acid, 435—gaseous, ib.—simple substances with poisonous qualities, ib .- in reference to medical jurisprudence, 432-distinguished from aliments and medicines, III 179-the same kinds do not act alike on different animals, ib -extensive poisonings with aqua tofana, 329, 830-of spiders, 373-of the bee, IV. 573-of serpents, XI 456; XIX. 44, 45, 46, 48-poisonous animals, XIV 439fishes, ib; XII. 236, 312, 331 n.—imaginary poisonings, XIV. 440—substances poisonous to plants, V. 173—ordeal by poison, XVI 701-Nicander's poems

on poisons and their antidotes, 242—poisoning of rats, XXI. 548. Poison-gland of serpents, III 113; XIX. 44—poison-fangs of, XVI. 431, 432; XIX. 44

Poisson (Simon Denis), XVIII. 136—on the stability of the planetary system, I. 813, 824-on rotation, 824-invariability of the mean solar ray, ib.—on the conduction of heat, 951—his writings, 825-on the propagation of sound, II. 104—on electricity, VIII. 581; I. 989—his theory of capillary attraction, XII. 100, 101; and of waves, 74—on gunnery, XI. 129-on magnetism, XIV.

# POI-POL

91, 92-on optics, XVI 546-on the possibility of a projectile from the moon reaching the earth, XIV 685-on pro-

bability, XVIII 590, 591
Poitevin (M), his photo-lithographic process, XVII 554

POITTERS, in France, XVIII 136—battle of, VI 614; VIII. 683; X. 18—population, 277

Poirou, in France, XVIII 136; X. 277 Poke-weed, order of plants, V 136 POKHURN, town in India, XVIII. 136 POKUR, in India, XVIII 136 Pol DE LEON (St), in France, XVIII

Pola, amphitheatre at, II 731

136

POLAND, XVIII 137—partition of, IV 391, XIX 488—Polish bibles, IV 702 -corn trade of, VII 402, with Eugland, VIII 732-Napoleon's conduct towards, X. 144, 148, 155—debate on in the French chambers, 205—language of, IX 392; XIII. 214—Jews in, XII 782, 783—hbraries in, XIII 425—coins of, XV 442, 444, XVI 389—monarchy of, XV 414 -Prussia's share in the partition of, XVIII 655—wars with Russia, XIX 475 et seg : insurrection of 1830. 498—natives of in Russia, 663—effect of the Revolution of 1830 in Paus on, XVIII.156-Campbell the poet's interest in, VI 127—silk produced in, XX 278
—wars with Sweden, \$48, 851—deposition of Augustus and elevation of Stanislas to the throne, 853-remstatement of Augustus, 854-weights and measures, XXI 813.

kingdom of European Russia, XVIII 160.

Polar Bear, XIV. 153, 154.

—— Circles, X. 481

—— Lights See Aurora Borealis REGIONS, ARCTIC, XVIII 161-recent voyages to, X 478, 474-furred animals of, 845-insects of, IX. 70abundance of birds in, XVII 633-rarity of thunder storms in, 615plants of, V. 226-Parry's voyages to, XVII. 306 et seq : Franklin's, X. 296; Ross's, XIX. 424; Lyon's, XIII 750.

- Antarctic, XVIII 181 Seas, phenomena of, XVII 583 surface water sometimes nearly fresh, 574-Russian islands in, XIX 552. Pelariscope, I 909.

Polarity of magnets, XIV 20.
Polarization of Light, XVIII. 182;
XIII. 453; XV. 57; XVI. 532, 537 et seq.—discovery of by Malus, I. 754, 901, 902—history of the discovery, ib.—Huygen's discovery of polarization by cale spar, 902-by reflection, ib .-- by common refraction, ib —Sir D Brewster's researches on, 912—law of, by reflection, ib.—imperfect polarization, ib. polarizing structure in heated glass, ib -phenomena as shewn by uniaxal crystals, 913-metallic polarization, 914-Dr Faraday's experiment, 981-rotation of plane of polarization of a ray of light, ib -circular polarization, 905-colours of crystallized bodies in polarized light, 908—laws of, VI. 652, 659—idea of may be traced to Newton's Optics, I. 754, and n.—of sky light, XIV, 682—polarization of heat, I 956; XI. 267—circular, XVI. 683; I. 956—polarizing microscopes, XIV. 788.

Polcura, or alum-earth, II. 688. Polders, in Belgium, IV. 611; in Holland, XI. 582.

Pole (Reginald), archbishop of Canterbury, XVIII. 182; VIII. 705, 700.

(Wellesley), V. 624—mint remodelled by, VII. 80.

- XVIII. 182-poles of the earth, IV. 1; X. 480-Daines Barrington on the possibility of reaching the North Pole, IV. 472 — terrestrial magnetic poles, I. 990, 991; XIV. 50, 3, 11, 20; XVII. 617—poles of maximum cold, XIV. 11—poles of the ecliptic, IV. 12.

See Polar Regions.

# POL-POL

Pole, positive and negative, in voltaic electricity, XXI 629 - or Perch, XVIII 182, XVII 406. Pole-cat, XIV 157-its fur, X 348 POLEMARCHUS, XVIII 182, III 517. Polematas, VII 655 Polemoniaceæ, nat ord of plants, V.

Polemon, kings of Pontus, XVIII 202

Poleni (Marquis), on hydrodynamics, XII. 71, 117

Polenta, XII 662. Pole-star, VII 787. Poletæ, XVIII 182

Polevoy (N. Alexievich), Russian author, XVIII. 182

Polhil on the Divine attributes, XXI. 192.

Poli (G Xaverio), XVIII. 183. Polianite, mineral, XV 111

Policastro, town of Naples, XVIII. 183; XX 241.

Police, XVIII 183-medical, XIV 440; Olice, XVIII 183—medicii, XIV 410 of apothecarnes' shops, 441—of London, XIII 678—Dublin, VIII 220—Edin-burgh, 404—Glasgow, X 658—Peters-burgh, XVII 489—of Ireland, XII 503, 524—Indian, XI 591—Belgian, IV. 614

—Police Gazette, X 444.

Policy of Insurance, XVIII 209—
stamps on, XII. 409—its lumis as to residence, 410—interest of one person effecting a policy on the life of another, 1b -surrender of a policy, ib. See Insurance.

Polidoro, painter, XVIII 209; XVII 69 See Caravaggio (Polidoro da).

Polignac, X 192 et seq —his ministry, 106 —trial and banishment of, 203

POLIGNANO, town of Naples, XVIII 209. Poligny, town of France, XVIII. 209. POLILLO, island, XVIII. 200.

Polishing of specula for telescopes, XXI.

Polistes, genus of insects, IX 197 Polistina, town of Naples, XVIII 200. POLITIANO (Angelo), Italian author, XVIII. 209.

POLITICAL ARITHMETIC, XVIII. 209
ECONOMY, XVIII. 210, XI. 545 -inadequacy of the term to express the nature of the science, I. 310-Arstotle on, III 509—Beccara on, IV 568—Dr Chalmers' work on, Vt. 405—Ricardo on, XIX. 154—value of statistics to, XX. 549. See Gredit, Colonies, Commerce, Corn-Laws, Cottage-system, Currency, Economists, Emigration, Money, Poor-Laws, Popu-

lation, Taxation, &c. education, XV 811.

- ethology, XIII. 264. - Geography, X. 459. - liberty, XIII. 260.

medicine, XIV. 463.

Science, little advance made in, prior to the 17th century, I. 20.
Politics, Aristotle on, III. 566—wherein different from political economy, XVIII. 223—Academies of, II. 71. Poliziano (Angelo), VI. 746; XVII. 522. Poll, XVIII. 261—for member of Parlia-

ment, XVII. 296

Polla, La, town of Naples, XVIII. 261. Pollar dish, XII. 243; XVI. 123.

Polled-cattle, II. 341. POLLEN, XVIII. 261; V. 118, 126, 128,

154, 155-active molecules in, III 205 -function of, XVII. 688-collected by hees, IV. 572.

POLLENZA, in Majorca, XVIII. 201. Poll-evil, XXI. 558.

Pollicipes, fossil barnacles, XVII. 101. Pollic (Calus Asinius), XVIII. 261— Virgil's Ecloques begun at the sugges-

tion of, XXI. 504.

(Vedius), his treatment of his slaves, XX. 319.
Pollock, fish, XII. 243, 269.

—— (General), on an electrical pheno-menon in India, VIII. 583.

- (ROBERT), post, XVIII. 261.

### POL-POL

POLLOCKSHAWS, XVIII 261-Monteith's weaving factory at, VII. 450-printing of calicoes first introduced at, X 648 POLLUX, XVIII 263; VIII 36

- (Julius), ancient Greek writer, XVIII 262

- mineral, XV, 72 Polna, town in Bohemia, XVIII 262. Polo (Maico), XVIII 262-on China, VI 561, 583, 595-his travels in Asia, III. 758; X 469, 470, XVIII 163—first made Java and Japan known to Euro-

peans, XII 697, 708-Marsden's translation of his travels, XIV. 315 Polochrum, genus of insects, IX 195. Polotzk, Russian town, XVIII 263. Poltava, in European Russia, XVIII 263, XIX 521

Police (St), in Lower Austria, XVIII

Polyacanthus, genus of fishes, XII 290. Polyamus, XVIII. 263 Polyangulai kaleidoscope, XIII 39 Polyanthus, culture of, XI 753 - narcissus, V. 112; XL 752

Polyargite, mineral, XV 79. Polybasite, mineral, XV 121 Polybius, Greek historian, XVIII 264on government, VIII. 700, 765-on the balance of power, 1V. 389, n.—on Han-nibal's passage of the Alps, VI 293, n.—

Folard's Commentaries on, IX. 749-on geography, X 467-Gronovius' edition of, XI 67-recovery of portions of his History, XVII 213-discrepancies between him and Livy, XIII 526

Polybus, Greck anatomist, II 749. POLYCARP, XVIII. 264; IX 491 Polycentral kalerdoscope, XIII 39 Polycera, genus of mollusks, XV. 871. Polychroite, VIII. 207.

Polychroism, artificial, in optics, XVI.

Polychromy, XIX. 868. Polychrus, genus of serpents, XIX. 34 Polyclerus, Greek statuary and architect, XVIII 265; XIX. 854. Polychnum, genus of mollusks, XV 331,

332 POLYCRATES, Greek tyrant, XVIII. 266 Polycystineze, XVII. 94.

Polydesnius, genus of myriapods, XV. 748

Polydonta, genus of mollusks, XV. 375. Polydone, Virgil, XVIII. 266. Polyergus, genus of insects, IX 194. Polygalacee, nat. ord. of plants, V. 188.

Polygamua, in botany, V. 177.
Polygamus birds, III. 181.
Polygamy, XVIII. 266—in Arabia, III 554—Arracan, 675—prevalent in Asia, 117, 554—on Ashantee, 727—Beloochistan, 1V. 642—China, VI. 595—Polynesia, XVIII. 271—Siam, XX. 283—among the ancient Germans, X. 573—among the Mormons, XV..591-sanctioned by the Mohammedan religion, 304-a viola-

tion of the primary law of marriage, -becoming rare among the Turks, XXI. 378.

Polygliptic process, in photography, XVIL 545.

POLYGLOT, OF POLYGLOTT, XVIII. 266; TV 697.

Polygnorus, ancient Greek painter, XVIII 266; XVII. 58, 56

POLYGON, XVIII 267, X 507, 508, 513, 524, 528—to find its area, XIV. 504, 505 polygons of loads, 381-of resistances, 1b -flexible, XX. 542.

Polygonaceæ, nat ord of plants, V. 204. Polyhalite, mineral, XV. 96.

POLYHEDRON, XVIII. 267-mensuration of. XIV. 508 POLYEISTOR, XVIII. 267

POLYHYMNIA, one of the muses, XVIII. 267, XV. 699

Polykrase, mmeral, XV. 110. Polylite, mineral, XV 81 Polymerism, VI 450, 503. Polymignite, mineral, XV. 110.

Polynemidae, or Polynemids, family of fishes, XII. 278.

# POL-POM

Polynemus, genus of fishes, XII. 278 POLYNESIA, XVIII 267, IV. 251-diving ın, VIII 57—height of mountains, XVII 645-volcanoes, 589-botameal region of, V 228, XVII 628-reptiles, XIX See Tahiti, &c

Polynesians, in ethnology, IX 347 Polynia, open sea in the Polar Regions, XVIII 176

Polynce, genus of annelides, XI. 300 Polyodon, genus of fishes, XII 317 Polyommatus, genus of insects, IX 208 Polypary, XVII 95.

Polypes, zoophytes, XXI 974, 1001 1adiated, 1002—molluscan, 1001. POLYPHEMUS, a Cyclops, XVIII 283 Polyphractus, genus of fossil fishes, XII

Polypidom, XXI 1001.

Polypurcraon, musical instrument, XVII 283. - genus of birds, XVI 786

Polypoda, echmoderms, XXI 986. Polypodiacne, sub-order of ferns, V 216 Polypody, tribe of ferns, V 216 Polypuon, genus of fishes, XII 276 Polypterichthys, genus of fishes, XII

Polypteridæ, family of fishes, XII 317 Polypterus, genus of fishes, XII 316,

Polyptychodon, fosul reptiles, XVII 152 Polypus, III. 175, 176—fosul polypi, XVII 95

a disease of cattle, XXI 571 Polysphænte, mmeral, XV 106 Polystoma, genus of entozoa, XXI. 980 Polytechnic school, in France, X 272,

Institution, falling off the staircase in, XX 733

POLYTHEISM, XVIII. 283—origin of, IV. 216. See Mythology, Pagans. Polytriglyph, III 512. Polytypage, XVIII. 552.

Polyuranodon, genus of fishes, XII 281 Polyxenus, genus of myrapods, XV. 748 Polyzoa, zoophytes, XXI 1002 Pomacanthus, genus of fishes, XII. 802fossil, 344

Pomacentius, genus of fishes, XII 265. Pomanotis, genus of fishes, XII 277

Pomare, kings of Tahiti, XVIII. 281.

—— queen of Tahiti, XVIII 281—proceedings of the French legarding, X

Pomatomus, genus of fishes, XII 275. Pomba (Villa da), town in Brazil, XVIII

POMBAL (Dom S José de Carvalho, mar-

quise de), XVIII. 283, 387-his policy in reference to Brazil, V. 284 - Portuguese town, XVIII. 283.

Pome, in botany, V. 138 Pomeæ, sub-order of plants, V. 191 Pomegranate, V. 192

Pomerania, in Prussia, XVIII. 284— farming in, 666—reduced by Gustavus Adolphus, XX. 849.

Pomerov, town in Ohio, XVIII. 284.
Pomerer (John), poet, XVIII 285.
town in Yorkshire, XVIII 291.

Pommade, XVII 409 Pommel, in tanning, XIII 809 Pomærium, XVIII. 285.

Pomona, one of the Orkney Islands, XVIII. 285; XVI 718 Pomotis, genus of fishes, XII. 277. Pompadour (Madame de), X 37

POMPEH, XVIII 285; III 445, 457; XI 844—streets and houses in, III. 471, 472—domestic utensils found in, 473 architectural remains of, 516-theatre of, 470-pictures found in, XVII 81frescoes and bronzes, XV. 781, 782,

Pompeium, in ancient Athens, IV 161 Pompeius (Trogus), XVIII. 289; XXI.

POMPEY (Cneius), XVIII 288; VIII. 471; XIX. 822 et seq.—Jerusalem taken by.

# POM-POO

XII 733, 770-his expedition against Mithridates, XV. 285, XVIII 292 POMPLY (SEXTUS), XVIII 289, XIX 329 Pompey's Pillar, II 472; VIII 497-affords evidence of the absence of earthquakes in Egypt in modern times, XVII 617

Pompilus, genus of insects, IX 195 Pomponatius on the power of the will in curing diseases, XX 416

Pomponius (Mela), XVIII. 289; XIV.

POMPTINE OF PONTINE MARSHES, XVIII. 289; VI 123; XII 636, XVII 242. Ponany, Indian seaport, XVIII 290 PONCE (Pedio), XVIII 290, VII 688. Poncelet (M), on hydrodynamics, XII.

75, I 889, 890—his experiments in hydraulics, XII. 149—his wheel, 75,

166 POND (John), astronomer, XVIII 290-

his improvements in practical astronomy, I 849-on the parallax of the fixed stars, IV 81-his controversy with Di Brinkley on that subject, I 864 peculiatity in his sense of hearing, XV 703—on the pendulum, XXI 800. Pond-snails, XV 374

PONDICHURRY, XVIII 290; XI 482, 485 Poudweed order of plants, V 214
Ponera, genus of insects, IX 194
Pomatowski (Count), VI 384, 386, XVIII

or Poniatofiski (Prince Joseph), XVIII. 290, 150, 151; X. 159 et seq, 165 , XXI 855.

Pons, astronomer, I. 858-comet dis covered by, 850

(St), town in France, XVIII 291. town in France, XVIII 291 PONT-A-MOUSSON, town in France, XVIII. 291.

PONT-AUDEMER, town in France, XVIII.

Pont Cysylte aqueduct, III 838 Pont du Louvre, XII. 580, d'Austerlitz, 1b.—d'Archevêche, 581—St. Denis, ib PONT ST ESPRIT, town in France, XVIII.

Ponta Delgada, IV 336 PONTARLIER, in France, XVIII. 291; VIII 114.

PONTECORVO, in the Papal States, XVIII 291; XX 237.

Pontedenaceæ, nat. ord. of plants, V. 213 PONTEFRACT, town in Yorkshiie, XVIII 291; XXI 959—Castle, ib

PONTE LAGOSCURO, in the Papal States, XVIII 292

PONTEVEDRA, XVIII. 292; X 878. PONTEVICO, XVIII 292.

PONTIANAK, town and state in Borneo, XVIII 292; V. 47. PONTIFEE OF PONISH, XVIII. 292; XIX.

Pontine marshes See Pomptine marshes Pontius, the Samnite, XIX. 304 PONTIVY, town in France, XVIII 292.

Pontoise, town in France, XVIII 292. Ponton (Mungo), his photographic process, XVII, 545—photometer proposed by, 555.

PONTOON, XVIII. 292-train of artillery, III 703.

PONTOPPIDAN (Eric), XVIII. 292; X1X. 692-his account of a merman, XIV. 217

PONTREMOLI, town in Parma, XVIII 202. Pontus, XVIII 292—monarchy of, XV. 414—coins of, XVI. 374—Cæsar's cam-paigns in, XIX 326 See Mithridates. PONTYPOOL, XVIII 293.

Pony, XI 656-Highland, II 838 Ponz (Antonio), XVIII 298. PONZA or Pontia, island, XVIII 293. Pool (Gernt Tomaz), exploratory voyage of, IV. 252.

Poole, in Dorsetshire, XVIII. 298; VIII.

(MATTHEW), XVIII 294 (Mrs), on Egypt, VIII. 421-her work on Egypt, 449.

# POO-POP

Pooly (H), his locomotive weighing machine, XXI 798 Poon-wood of India, XXI 277

Poona, town in India, XVIII. 294, XI. 503, 504

Poonahlite, mineral, XV 75. Poonseed oil, XVI 496

Poorsunder, town in India, XVIII 295 Poor, state of, in Lancashue, XIV 257— Manchester, 257—Edinburgh, VIII 405
—France, X 268—Holland, XI 589— Spain, XX 493—education of, in England, VIII 745—then light to support, XVIII 257 See Mendicacy, Pauperısm, Pooi Laws

Poor-Laws, XVIII 295—their origin in England, VII 376, 377, n—in Scotland. XIX. 810-cottage system, VII 427, 433

"Poor men of Lyon," followers of Valdo so called, XXI 510

Poor-lates, English, VIII 748, XVIII 307, and n 2, 309, n. 1—permicious effects of paying wages out of, VIII

Pooshkin, Russian author, XIX 547. POPAYAN, town of New Granada, XVIII. 317.

POPE of Rome, XVIII 317-Aquinas on the power of, I 436—ceremony of kissing the feet of, II 150—books prohibited by, IV 712—his council, VI 235 election of, ib , VII 228, XVII 244 -power of, during the middle ages, 531 effect of the crusades on the power of, ib -tiara of, XI 335-monarchy of the popes, XV 414-consistory, VII his claims to be regarded as the 208successor of St Peter, XVII 482—list of Popes, XVIII 319—rise of the papal power in Rome, XIX 865-Rome under the Popes, 367—Pope lunocent VIII grants a bull for the extinction of the

Valdenses, XXI 509. See Popery.

(Alexander), XVIII \$20—mistake of, concerning the doctrine of necessity, I 128, n 1—his censure of Newton and Clarke's reasonings on the existence of a Derty, 140, n 2, 146—Spiniozisin and Pantheisin, with which he charged Clarke, brought against himself, 147 his admination of Berkeley, 163-Memoirs of Martinus Scriblerus, III 398; XX 873-his intimacy with Atterbury, IV. 190; and with Swift, XX 873-his treatment of Broome, V 679—his injus-tice to Burman, 789—his satire on Dr S Clarke, VI 758-his opinion of Dryden, VIII. 203-poetry of, XVIII. 123 his quarrel with Lord Haivey, XI. 361 —intimacy with Lady Mary Montagu, XV 505—his epigranis, IX. 275—epitaphs, 283-his criticisms on Philip's poems, XVII 514—Rescee's edition and life of, XIX 419—Warburton's Vindication of his Essay on Man, XXI. 728, 729-his friendship with Warburton, ib. —Warton's essay on his writings and genius, 783; and edition of his works, 784—his definition of wit, 894

- (Mr) on the construction of bridges, XII 582.

(Sir Thomas), XVIII 322-founder of Trinity College, Oxford, XXI 459— Warton's Life of, 785

POPERINGHE, town in Belgium, XVIII.

POPERT, XVIII. 386—favoured by Charles H, V 430, 483—and by James II., 485—baptism, IV. 424, 425—canon law, VI 188—canonization, 192—See Uelibate, Penance, Purgatory, Reformation, Relics, Roman Catholic Church, &c. Pop-gun plot, V 555.

POPHAM (Sir John), XVIII 887.

— (Sir Home), his capture of Buenos Ayros, V. 602, XVII. 780—his code of naval signals, XVI 100. Popish plot, V. 427; XII. 488. Poplar, parish in Middlesex, XVIII.

Poplar-trees, XVII. 754, 759, 765—use of the wood in joinery, XII. 817—specific

#### POP-POR

gravity of the wood, 89-as timber trees, XXI 278

Popo, Great and Little, African towns, XVIII 337

POPOATEPETL, volcano, XVIII 338; XIV 714—height of, XVII 645, 593 POPPEA (Sabina), XVIII 338; XIX 387. XVIII 338; Poppi, town of Tuscany, XVIII 838 Poppy cake, as manure, II 405-analysis of, th

-, order of plants, V. 182 —, cultivation of, in Bengal, IV 649 —poppy-seed oil, XVI 495—Mexican,

POPULATION, XVIII 938—its increase in America, II 708—as influencing agriculture, 267—capability of America of supporting an immense, 710—its redundancy a reason for colonization, VII 136—Malthus's theory of, 137—ten-dency of the cottage system to increase it, 433, 434-effects of the cotton manufacture on, 454—emigration a remedy for superfluous, VIII 649—Filangien on, IX 576-its tendency to increase, XIV 441—companison of postal correspondence with the, XVIII 425—of Egypt, ancient and modern, VIII 426, AXI AND STATE THE STATE OF THE XXI. 622. See the Geographical Ar-

Porambonites, fossil mollusks, XVII 104 PORAMUSHIR, Island, XVIII 360
PORCELAIN, XVIII 360—Chinese, VI 586,

587—Japanese, XII 693—manufacture of, in England, VIII 732—Shiopshire, XX. 280—France, X 255—photography 

Porcellia, genus of mollusks, XV. 375-fossil, XVII 109. PORCH, XVIII 860.

Porcupa, XVIII 360.
Porcupa, town in Spain, XVIII 360
Porcupa, XIV 187; XVII. 632—skull
and teeth of, XVI 453—jaw, 419.
Pordenone, town in Italy, XVIII 860

, surname of G A. L Regillo, Italian painter, XVIII. 860 Pores in the leaves of plants, V 103 Porewort, order of plants, V 183

Porifera, zoophytes, XXI 1008 Porism, XVIII. 860—Euclid's last treatise on, X. 500-Playfair on, XVIII. 5-restoration of Euclid's Porisms by Dr Simson, XX 300

Poritidæ, zoophytes, XXI. 1005 Pork, cutting and curing of, II 356—as food, IX 762—value of the imports of, VIII. 735.

Poros, island, XVIII. 366 PORPHYREON, city of Phoenicia, XVIII

Porphyrio, genus of birds, XVI 807 Porphyrops, genus of insects, IX. 243. PORPHYRY, XVIII. 366, 14, XII. 194-on Egyptian writing, XI. 376—did he forge

Sanchuniathon's cosmogony? XIX 595 , in geology, XV. 131—truchytic, 132—felstone, or feldspar, 134—quartzz-ferous, 135—in Scotland, XIX, 793—its resistance to crushing, XX. 718.

Porpoise, XIV. 225—teeth of, XVI. 445—white, at the mouths of the Danube, IV. 743

Porret on electric currents, XXI. 629. Porro (M), his method of illuminating micrometers, XIV. 745—his micro-meter, 752—his helioscope, XXI 188. Porsena, or Porsenna (Lars), king of Clusium, XVIII. 866; XIX. 298. Porson (Richard), XVIII. 866.

Port, or harbour, XVIII. 371. , in sea language, XVIII. 371. Porta (Baptista), on optics, I. 624; XIII

# POR-POR

449; XVI 525 — popularity of his Magia Naturalis, I 625—his physical researches, IV 449-on the concentration of cold by reflection, VII 99; I 762-on dew, VII 766-on anæsthetics, VI 632-gunpowder, XI 152-principle of the stereoscope explained by, XX

Porta (Giacomo della) his merits as an architect, II 452

(Guglielmo), sculptor, XIX 863 (Giambattista della), on pneumatics, XX 578,

Portable steam-engines, XX 614 PORTADOWN, Irish town, XVIII 371; II 613

PORTAFERRY, Irish town, XVIII 371; VIII 122

Portal (Antoine), his system of anatomy, II 767, III 73. PORTALEGRE, Portuguese town, XVIII

371

Portales, VI 553
PORTARLINGTON, Irish town, XVIII 371,

PORT-AU-PRINCE, XVIII 371, 376. PORTCULLIS, XVIII 371; VI 327. PORT ELIZABETH, XVIII 371 Porte (the Sublime), XXI 380 Portenau See Pordenone Porteous mob, VIII 393

Porteon mon, VIII 397; IX 759— brewing of, V. 330—cause of its dark colour, 351—cartt, ib—alcohol in, 332— London porter, XIII 665; XIV 809 use of, in France, X 256.

(Jane), novelist, XVIII. 271—her Scottish Chiefs, XIX. 281

(SIR ROBERT KER), XVIII 371on the runs of Babylon, IV 344—his account of Persepolis, XVII 431, 432.

(G. RICHARDSON), statist, XVIII.

(Rev N), on Coleridge, VII 110 (Rev J L), on the runs of Pales-tine, XVII 189, of Palmyra, 222, 223. Mr), on the sugar cane, XX 792.
PORTEUS (Beilby), XVIII. 372
PORT-GLASGOW, XVIII. 372.

Porthmeus, genus of fishes, XII 293, 298
Postriot, XVIII 373; XX 240—dial found
at, VII 774—palace at, XV 782.
Portico, XVIII 373; III 513—Palla-

dio's porticoes, III. 452—hardly known in Italian architecture, ib. Porticus, in architecture, III. 512.

PORT-JACKSON, XVIII 373. PORTLAND, isle of, XVIII 873—convicts employed on, 583—harbour of icfuge at,

XI. 221-quarries of, VIII. 111-oolite, XV. 206, 208-sands, 208. stone, XV. 208—boring of, V 44vast blocks of, VIII. 112-as a building stone, XX. 712-its transverse strength,

717—resistance to crushing, 718 -, in the State of Maine, XVIII 373.
- VASE, XVIII. 373; X. 657—Wedg-

wood's imitations of, XVIII. 434. Roads, construction of a break water in, recommended, V 310.

Coment, V. 742; XX 714, 715

PORT LOUIS, in the Mauritrus, XVIII.
374; XIV. 363, 364.

PORT MAHON, XVIII. 874, XV. 251. Porto Alegre, town in Brazil, XVIII.

PORTOBELLO, in Midlothian, XVIII 374; VIII 409, 410, 411.

—, in Panama, taken by the Bucan

eers, V 711 Porto d'Anzio, XVII 240 Porro Felix, town in Brazil, XVIII.

374 Porto Ferraja, in Elba, XVIII. 374: VIII. 521.

Porto Maurizio, XVIII. 374 Porto Novo, in India, XVIII. 374. Porto Rico, island, XVIII. 374—sugars of, XX. 795

Porto Santo, in Madeira, XVIII. 875; XIII. 799.

PORT OF SPAIN, XVIII, 875.

# POR-POS

PORTPATRICK, in Wigtonshire, XVIII 375 -violence of the waves at, XI 217 PORT PHILIP, XVIII 876, IV 286 et seq , XIV 478

Portrait painter, a blind, IV 781 Portrait - painting, XVII 56, Joshua Reynolds on, III 716 56, 57 - Sir Portraits of Christ, XII 764, 765

graphic portraits, XVII 553-historical portraits, III 716 PORTREE, XVIII 376; XX 317

PORT REPUBLICAIN, XVIII 376; XI. 256

ROYAL, in Jamaica, XVIII 376, XII. 673.

- in Martinique, XIV. 322 two nunneries so named, XVIII See Arnauld

Ports of a ship of war, XVIII 371 Portsea, XVIII 377, 378, XI 204. Portsмouth, XVIII 377, XI 203— direct Portsmouth railway, ib—naval academy at, II 71—block-machinery at, I 879; IV 783—fire in the dockyard of, in 1776, V 504-fortification of, 516, 517-basın at, VIII 79-dockyard, 83-

Naval College, 1b —naval architectural school, 1b, XX 134—harbour, VIII 721—convict establishment at, XVIII 583-early origin of dockyard, XX 120; unproved by Henry VIII, 126-expe riments at, in firing at iron-plates, XX

in the state of New Hampshire, XVIII 380

-, in the state of Virginia, XVIII. 280

-, in the state of Ohio, XVIII 380. PORTUGAL, XVIII 380, IX 403—construction of a map of, II. 62—Royal Academies of Science and Portuguese history, 07, 69—colomos, 609, 702—sottle-ments in Angola, III. 160—pointed archi-tecture, 449—army, 643—discovery and settlement of Brazil, V 279—war with France and Spain in 1762, 465—French invasion of m 1807, 603, X 148—British troops sent to in 1826, V. 650-settlements in Ceylon, VI. 805—colonies, VII. 149—commercial treaty with Britain in 1703, 193-bride with England, VIII
1703, 1733—Indian possessions, X. 689,
610—language, XIII 213—coms, XV
442, 444; XVI 387—newspapers, 203—
postal system, XVIII 424—romance, XIX. 265—monarchy, XV. 414—Osorio's work on its condition under Emmanuel. XVII. 4—slave-trade, XX. 322, 323—tobaccomanufacture, XXI 294—weights and measures, 813—wines of, 885—map of, XX. Plate. See Alphonso, Portu-

- Laurel, XVII, 761. Portugulete, silver mines of, IV. 828. Portuguese, their missions to Abyssinia, II. 56 - first circumnavigated Africa, 210-their quarrels with the Hottentots 222-maritime discoveries, X. 470, 474 —intercourse with the Japanese, XII. 696; and Chinese, XIII. 756—their progress in discovery, XX. 124-not the originators of the slave-trade, 320. See

man-of-war, Zoophyte, XXI. 999. Portulacacee, nat ord of plants, V. 193. PORTUMNA, Irish town, XVIII. 399. Portus (Æmilius), Greek critic, XVIII.

- (Francis), philologer, XVIII. 400. Port wine, XVI. 519; XVIII. 897; XXI. 885-specific gravity of, XII. 89-alco-

hol in, XXI. 889, 890.

Porus, Indian Prince, XVIII. 400—defeated by Alexander the Great, XIII. 769.

Poseidon, XVIII. 400; XVI. 140. Posen, in Prussia, XVIII. 400-agriculture of, 606—swarm of ants at, III. 205 Posidonia, or Pustum, XVII. 43. Posidonius, XVIII. 400; X. 501-earth's size, IX. 547; X. 465.

Posidonomya, fossil mollusks, XVII. 106. Posilipo, promontory of, XX. 240. Pösino, town in Hungary, XVIII. 401.

# POS-POT

Position-micrometers, XIV 753 Positive electricity, VIII 535, 537 Positivism, XVIII 401, VII 211 Possessive, XVIII 401-case, X. 749pronouns, 756 Possneck, town in Saxe-Meinigen, XVIII

177

Post, XVIII 401

Postage of letters in Britain, XXI 67in Belgium, IV 626-Canada, VI 155existing rates of, in Britain, XVIII 417 See Post-office.

POSTERN, XVIII 401. Postn, XVIII 401 Post-horse, XI. 660

Posticum, in architecture, III. 512 Postliminium, XVIII 401.

Postmaster-general, XVIII 403, 405-for foreign parts, 403

Postmasters, heense duties paid by, VII. 43; XIII 435

Post-Office, XVIII 402—in London, XIII 669—Glasgow, X. 651—Canada, VI 155—Scotland, XIX 810—revenue from, in Austria, IV 316, France, X 274—abuses of franking, V 168—transmission of newspapers, XVI 192 — revenue of that of the United Kingdom, XXI 68-in the United States, XXI. 427, 767

Post-pleistocene strata, XVII 607. POSTULATE, XVIII 427 : XIII 576 Pot, and Pot-book, in gold coming, VII

Potameides, river-nymphs, XVI, 396. Potamides, fossil mollusks, XVII, 110. Potamogetonacca, nat. ord. of plants, V. 214.

Potarco, in zoology, XIV 176. Potasu, XVIII 427; VI 484—caustic, 485—in plants, II 888—nitrates of, 113 -salts of, ib -silicates, ib -carbonates, ib - proportion of, in felspars, 389, VI 524-in farm-yard manure, II. 403—gunpowder from chlorate of, XI. 158—poisonous properties of, XIV 434 -optical properties of the sulphate of,

Potash-alum, II. 635, 636; XV. 97. Potassa, in minerals, XV 65—chlorate of, discovered by Berthollet, IV. 677; its

poisenous properites, XIV 484.
Potassum, VI. 484—Davy's discovery of,
VII. 669—an element in mineral, XV. 60, 61.

POTATO, XVIII 427; IX 760-culture and varieties of, II 315; XI 739-morganic matter in the leaves of, II. 385-composition of the ash of, 587-sulphur in, 988-mineral matters and nitrogen removed from land by a crop of, 417moved from and by a crop of, 47—state of the people where it forms the principal food, VII. 435—disliked in Lombardy, XIII. 637—lise culture in Chill, VI. 649; Mexico, XIV. 716; Bengal, IV. 649; India, XI. 456—value of the imports of, VIII. 735- brandy distilled from in Norway, XVI. 323 - potato spirit convertible into rum, VI. 516 - acreage under, in Ireland, XII 515, 516; amount of produce in 1855, 517 - acreage in Scotland, XIX 797; produce, ib - distilleries from, in Prussia, XVIII. 666.

-disease, IL 201; V. 172, 670; XI. 739—effects of, II. 315—comparatively little felt in East Lothian, II. 370. - order of plants, V. 201.

POTEMKIN (G. Alexandrovich), Russian statesman, XVIII. 428; XIX. 485; XXI. 370, 371.

Potent-counter-potent, in heraldry, XL. 325.

POTENTIAL, in grammar, XVIII. 428. -, in electrical attraction, I. 980, 004

POTENZA, town in Naples, XVIII. 428. Potentillida, nat. ord. of plants, V. 191. Porteier (R. Joseph), Jurist, XVIII. 428. Potidaea, Socrates at, XX. 375. Potin, metal used in coining, XVI. 353, POTOMAC, river, XVIII 489; XIV. 380; XVII. 647.

# POT-POW

Potos, genus of mammalıa, XIV. 155 Porost, in Bolivia, XVIII 429; II 669; IV 821, 828—silver mines of, 825; XV 235-climate, IV 826-population, 827 -elevation of its site, XVII 593 (San Luis), Mexican city and state,

XIV 726, 718

Potowatomies, their marriage customs, II 681-their cannabalism, 682 Potschinki, Russian town, XVIII 429 Potsdam, in Prussia, XVIII 429 - sandstone, protichnites of, XVII.

130, 131.

Potstone, XV 79 Porr (Percival), surgeon, XVIII 429; XX 819

- (Mr), on alum, II 635

POTTER (John), archbishop, XVIII 430 - (PAUL), animal-painter, XVIII 430.

(Prof ), his photometer, XVII 555 (Mr), his microscope, XIV 784on the illumination of microscopic objects, 796—his mode of casting specula, XXI 135

Potter's clay, V 343; XV 83; XVIII. 438

-kiln, XVIII 441-wheel, 431 POTTERY, XVIII 430; XIV 440-Delftware, VII 705—cooling vessels, 100
Potteries in England, VIII 732, France,
X 256, Egypt, VIII 443—Staffordshire,
XX 580—of Arretium, III 594.

POTTINGER (Sir Henry), XVIII 445, VI.

597; XIII 85-his travels in Asia, III 739, n 3-in Beloochistan, IV 640, 641, on the character of the Asiatics, III 749, n 2

(Lieut Eldred), his defence of Hirat, XVII 442

POTTSVILLE, XVIII 445.
Pouchet (F A ), his work on the cock-chafer, IX 24. on the circulation of mollusks.

\_\_\_, on XV 357. Poudrette, manure, II 408

Poughkeepsie, town in New York, XVIII.

Poullet (M), on the electricity developed in combustion, VIII 567-and by vegetables, 570, V 170-on magnetic metals, XIV. 16—his astatic needles, 90—his Pyroheliometer, 638—on the heating power of the sun, 637-on atmospheric electricity, 661—his hygrometer, XVIII 702-his electrical battery, XXI 617on the conductive power of liquids, 621 -his chronoscope, 644-his electrical experiments and researches, 624, 651.

Poultice, XX 822; XXI 555, n 3.
Poultry, XVIII 446; XVI 789—as articles of food, IX 762, 766—management of, II. 356—in France, X 249-artificial hatching of, XVIII 815.

Pouncey (Mr) his photographic process. XVII 550.

Pound, weight, XVIII. 446.

money, XVIII. 446—value of, in the 15th and 16th century, VII. 375, n. 1-degradation of, XV. 432.

---- (Mr), V. 263 POUNDAGE, XVIII. 446; XXI 307. POUROAIN (St), in France, XVIII 446. Poussin (Gaspar), painter, XVIII 446

(NICOLAS), painter, XVIII 446— character of his works, III 710, 711, XVII. 76.

Pouteau on the nerves, II. 814. Powder See Gunpowder.

Powders, electricity of, VIII. 564. Powell (Prof ), on the undulatory theory of light, I. 921-on the quality of heat transmitted by glass, 954.

Power (Dr), his experiments on atmospheric pressure, XVIII, 27
—— (Madame), aquana invented by,

XV. 328-on the argonaut, 402. -, mechanical, measurement of, XX.

See Prime movers, Energy. Power-loom, invention of, VI. 805, VII. 450; XXI 787—number of power-looms ın Brıtain, XIV. 278; Manchester, 252; Lancashire, VII. 457-wages of power-

### POW-PRE

loom weavers, XXI 919, 920-struggle of hand-looms against, 781 Powhattans, II 681 POWNALL (Thomas), XVIII 446 Poyaise, XI 77

Poynings, his government of Ireland, XII

474 Pozo-Blanco, town in Spain, XVIII 446 Pozzo DI Borgo (C Andrea), diplomatist, XVIII 446

Pozzolana, cement, XVIII 698. Pozzuoli, XV. 782 Practice, in anthmetic, III 593 PRADO, town in Portugal, XVIII 447 PRADD (W. Mackworth), XVIII. 447

PRÆFECT, XVIII 447 Præfioration, in botany, V 121. Præfoliation of leaves, V. 86 PRÆMUNIRE, XVIII 447

PRÆNESTE, in Latium, XVIII 447. Præses, XVIII. 509 Praeter-perfect tense, X 765, 767

Præter-imperfect tense, X 765, 767
Prætor, XVIII 448, XIX 298
Prætorians, XVIII 448, XIX 332 et seq —Pertinax murdered by, XIX 346

Praga, town in Poland, XVIII. 448 Pragmatic Sanction, XVIII. 448; XII

PRAGUE, XVIII 448; IV 310-national museum library at, XIII. 424-meteorological observations at, XIV 687-battle of, XVIII 653-university of, XXI

Prairies, American, XVII 609—of Illinois, XII. 361, Indiana, 371, Iowa, 459; Louisiana, XIII 700

Praise, love of, I 398 PRAM (C. Henriksen), Danish poet, XVIII. 450, XIX 694

Pranth, on the law of non-contradiction, XIII 573, n Prase, mineral, VI 67: XV 69

Praseolite, mineral, XV. 89 Prasin, mineral, XV 103 Prashn, Duke of, his murder of his wife,

Prasocuris, genus of insects, IX 150

Pratápgarh, in Oude, XVII. 17. Pratincoles, birds, XVI 808 Prato, Tuscan town, XVIII 450 PRATT (Charles), Earl of Camden, XVIII. 450

Prawn, VII 541, IX, 765 Praxagoras, anatomist, II. 750-his skill in surgery, XX 811.

PRAXITELES, Greek sculptor, XVIII. 451 -his works, XIX 858

Prayer, danger of it degenerating into superstitious formalities, L 494-542-Lord's and extemporaneous, Prayer, abuse of, I. 493

Preaching, as a means of grace, XXI, 219. PREBEND, XVIII. 451, VIII. 744. PRECEDENCE, XVIII 451.

PRECESSION OF THE EQUINOXES XVIII 452, IV 14—the discovery of, ascribed to Hipparchus, III 791; but known before his time, IV 14-Laplace's discoveries relative to, III 812-secular variation of, IV 131

PRECIOUS METALS, XVIII 459-gold and silver fittest for money, XV 417-their introduction, ib -production of, 420expense of a currency consisting of, 425 -value of, in different countries, IX. 431—what profits does a country derive from the possession of? VII 145—effect of their increase on productive industry, 188—exports of, from Chili, VI. 550; from Mexico, XIV. 717—produce of Russian mines in, XIX. 542, American, II. 706, of the world, ib See Coinage, Money, Mines, Gold, Silver.

Predazzite, mineral, XV. 92. PREDESTINATION, XVIII 477—Calvin's controversies regarding, VI 110—a Mohammedan doctrine, XV. 304, 808. Predicables, III 552; XIII. 599

Predicaments, III. 552. PREDICATE, in logic, XVIII 479; XIV.

Predication, forms of categorical, XIII

### PRE—PRE

583-through singular terms, ib through common terms, 584, 585, 590, 591-in comprehension, 593-in exten sion, 592-transference from whole to whole, 594

Pre-empsion Act in the United States, XXI 425

PREEZ, or Preetz, town in Denmark, XVIII 479. PRE-EXISTENCE, XVIII 479; XIV 628

Prefecture, in France, X 280 Prefixes, in the Kaffir language, XIII 226 Pregel, river, XVII 647, XVIII 662 Pregnancy, limits and signs of, XIV 426 -a bar to execution of a cuminal, 445 See Gestation

Prehension, organs of, XIV 134 Prehnite, mineral, XV 78—pyro-electri-city of, VIII 561

Prehnitoid, mineral, XV 73 Preller and Co's combing machinery, XXI 925,

Premare (Père), his specimens of Climese poetry, VI 577 Premises, in reasoning, XIV, 593

PREMIUM, in insurance, XVIII 479, XII. 409

Premnas, genus of fishes, XII 265. PREMONSTRATENSIANS, XVIII 479 PRENZLOW, Prussian town, XVIII 479. Preposition, in grammar, XVIII 479; X. 778, 783, 791—in Egyptian grammar,

Prepulsion, mechanism of, in human anatomy, III 40

Prepuce, VI. 733. See Foreskin. Pre-Raphaelitism, in painting, XVII 86 Pierogative (Royal), in England, VIII

776, 792. Presburg, population of, XII. 11. Presbyter, IX 279.

Presbytery, XII 371; XVIII 482, 493representation of the people in, 483 Presbyteman Churches in Ireland, XII

582, Scotland, XVIII. 402, United States, XXI. 422 See Presbyterianism PRESENTERIANISM, XVIII, 480.
Presbyterians, IX 894—ordination among,

XVI 704—persecution of, in Scotland, XIII 823. See Presbytenanism PRESCOT, in Lancashire, XVIII. 502.

PRESCOTE (William Hicking) historian, XVIII 502—on the civilization of ancient Mexico, III 502—on the roads of the ancient Peruvians, XVII 461on the civilization of ancient Peru,

(H. P) on tobacco and its adulter-ations, XXI. 295.

PRESCRIPTION, in medicine, XVIII. 507in English and Scotch law, 508

PRESENT TENSE, in grammai, XVIII. 509 X 764, 766. PRESENTATION to a hving in the church,

XVIII 509 Presently, VIII 9

Preservation of food, IX 767-of timber. XXI. 779; sec Timber

Presidencies (Indian), XI 529. PRESIDENT, XVIII 509—Lord President of the Council, ib.—of the United States, VIII. 775—his salary, XXI 429 -Name of 1st, Washington; 2d, Adams (John), Sd, Jefferson; 4th, Madison; 5th, Adams (John Quincey) Jackson, 6th, Buren; 7th, Harrison, 8th, Tyler; 9th, Polk; 10th, Taylor, 11th, Fillimore, XXI. 439-444

Press, XVIII 509-its condition in France at different periods, X. 170, 197, 198, 211, 213-newspaper press of the United States, XXI. 423.

- (Laberty of the). See Laberty of the Press, Label.

, machine, Bramah's hydrostatic press, IL 102; XII 75, 178; V. 273; VI 91. -, printing-press, XVIII. 583, 544.

558. PRESSBURG, town in Hungary, XVIII

500 Pressing of printed sheets, XVIII 547in woollen manufacture, XXI. 928.

# PRE—PRI

Pressirostres, tribe of birds, XVI 796 Pressure, mechanical action of, VIII 322 -composition of pressures, 335-electricity produced by, 562-of fluids, XII 78—of water in pipes, 135—centre of, 80—line of pressures, XIV 381—effect of, on the double refraction of crystals, XVI 657—of the atmosphere, its influence on health, XIX 609 See Atmosphere-equilibrium of pressures, XX 588 et seq —decomposition and recomposition of, 542—relation of the pressure and temperature of steam, 504 -pressure of steam, 563, 571 See Hydrodynamics

PRESTEIGNE, town in Wales, XVIII 500 PRESTER JOHN, XVIII 509, II 40; IV. 653; X 393, 476

PRESTO, in music, XVIII 510 PRESTON, town in Lancashire, XVIII 510 -battle of, V 454

PRESTONPANS, town in Haddingtonshire,

XVIII 510—battle of, V 400 Prestwich (Mr) on the eocene tertiary formations, XV. 157, and n 1; 212,

PRESTWICK, Scotch burgh, XVIII 510 Presumptive heir, III. 307 Pretender (The) See Charles Edward Preterition, in theology, XXI 217 PRETERITE, XVIII 510. See Præter-per-

Pretor See Prætor Pretsch (Paul), photo-galvanography invented by, XVII 544, 545, XXI 636. PREVESA, town in Turkey, XVIII 510 Prevot, romances of, XIX 287

Provost (Benedict), his experiments on dew, VII. 768—on the colours of metab, XVI. 686.

(Pierre), his theory of the moveable 

nocturnal, 745. See Raptores. Preysler (J. Daniel), his work on insects,

IX. 8. Prezemislas, king of Poland, XVIII 141

Priacanthus, genus of fishes, XII 277
PRIAM, king of Troy, XVIII. 511—character of, 101

Priapulus, echinoderms, XXI. 987. Priapus, XVIII 511

PRICE (Richard), D.D., XVIII 511-his work on the principal questions in morals, I 877—considered the understanding as an independent source of simple ideas, 378—does not explain the authority of conscience over the will, 1b —suggested the sinking fund scheme to Mr Pitt, V. 518—on Reversionary Payments, III. 221, 222; XV. 603, 605 -on the distinction between the will of -On the distinction between the wit of God, and his nature, 556-on the population of England, VIII. 758-on hie-assurance, XII. 388, 399-on mortality, XV. 026, 633, 634; XVIII. 511.

on carpentry, XII. 805; XIX. 385. - (William), glass-painter, X, 660

Prices, computation of, III 593—in ancient Athens, IV. 217—effect of the increase of the precious metals on, VIII 188; XVIII 475—effect of bank-notes on, VII. 189—effects of war expenditure on, 190, 199-prices of grain in England from 1646 to 1852, 397, 378-effects of the subdivision of land on the price of raw produce, 427-by what regulated, XVIII. 299-influence of competition on, 242-always coincident with the cost of production, ib - prices of hounds, XI. 770. See Corn-Laws. Taxation.

PRICHARD (James Cowles), XVIII. 512on the unity of the human race, II 121, XVII 536-on the indigenous Americans, II. 677-on the Celtic nations, VI. 363 et seq : XVII. 580-on ethnology, IX. 841, 348—on insanity, XIV. 520 et seq—on the varieties of the human race, XVII. 527.

Pricking, of horses, XXI. 580.

# PRI—PRI

Prikles of plants, V 75 Prickly-ash, order of plants, V 189. Pride (Col.), V 411—Pride's purge, 10 PRIDEAUX (Humphry), divine, XVIII 512
—on the Pentateuch and Canon, IV 695, 696.

(John), bishop, XVIII 512 (Syme), his furnace-door for admitting air, XX 357

PRIEGO, town in Spain, XVIII 513

PRIESSNITZ (Vincenz), hydropathist, XVIII 513

PRIEST, XVIII 513; I 510, n 1-distinguished from minister, 511-duties of 1b, 512—high priest, 488—of the gospel, 512—Christ's office of a, XXI 212.

Priesthood, Greek, IV. 217
PRIESTLEY (Joseph), XVIII 513 — his opinion of Hartley's theory, I 171, and n 2-on the composition of the atmosphere, IV. 180-burning of his house by the mob at Birmingham, 730, V 539 - on expansion from electricity, VIII 589-on the chemical power of electricity, 591-Horsley's controversy with, XI 690-on the resurrection of brutes, 763—library founded by his re-commendation at Leeds, XIII 314—a follower of Hartley, XIV 596.

Prieto (General), VI 553 Primary epoch, in geology, XV 195, and n 1, 196-rocks of Spain, XX 484

qualities of body, XIV 570
PRIMATE, XVIII 515 See Archbish PRIMATICCIO (Francesco), painter, XVIII 515 : XVII 63

Prime movers, in mechanics, XIV 416 Primer, type, XVIII 536, XXI 401, 403 Primeval ancient history and historians, XI 543, 548

PRIMING, XVIII 515; XI 98 See Gunmaking

-, in steam-boilers, XX 649-causes of, 650 Primitive Methodists, XIV 694
PRIMOGENITURE, XVIII 515—right of, not

recognised in France, VII 432 Primrose, order of plants, V 203
, evening, order of plants, V 192 Primula, genus of plants, V 203, XI.

Primulaceæ, nat ord of plants, V. 203. Primum mobile, XVIII 516 Prince, XVIII. 516.

(Le), the inventor of aquatinta engraving, VIII 801
(Mr), his air pump, XVIII. 42. Princedoms in Europe, IX 397.

PRINCE EDWARD ISLAND, XVIII. 517.

OF WALES ISLAND, XVIII. 516

Prince's feather, plant, V. 208.

ISLAND, XVIII 518

176: XXI, 751.

- ULTRA, XVIII 519, XX 287, 255 PRINGLE (Sir John), XVIII 519; IV. 420

-letter of, to Forbes of Culloden, about Alex Cunningham's papers, VII 587. – (Teomas), XVIII. 519

704. 705.

PRINTING, XVIII 520-invention of, IV. 706-opportuneness and effects of the invention, 709; I. 17; XIII. 888before the invention of, IV. 706—early, 708—for the blind, 776—Bramah's plan for printing by a roller, V. 278-correction of proofs, VII 415—in Glasgow, X. 653—Fust's share in the invention of, X 362-works on the origin and progress of, in Earl Spencer's library, XIII. 899 —lithographic, 518—printing ink, XII. 384—printing-presses and machines,

# PRI-PRO

XVIII 544, 558, 559 et seq -in Turkey, XXI 383 See Calico-printing, Bibliography, Copperplates, Gutenberg,

Typefounding
PRINTS, XVIII 563—early prints, from
woodcuts, XVIII 523, and n See Engraving

genus of mammalia, teeth of, Pilodon, genus of fishes, XII 804.

Priodontes, genus of mammalia, XIV.

Prionii, tribe of insects, IX. 143 Prionites, genus of birds, XVI 772. Prionodon, genus of fishes, XII 323. -, genus of mammalia, XIV. 166. Prionodus, genus of fishes, XII 286 Prionops, genus of birds, XVI 748 Prionotus, genus of fishes, XII 282 Prionurus, genus of fishes, XII 304. Prionus, genus of insects, IX 144. Priopis, genus of fishes, XII 275. PRIOR, XVIII 563; II 13

(MATTHEW), XVIII 563—passage from his Alma on the seat of the soul, I t9, n 2—poetry of, XVIII 124 Priories, in what they differ from abbeys,

TT 18 PRISCIANUS, grammarian, XVIII 563.

PRISCILLIANISTS, XVIII 563 PRISM, XVIII 563; X 535 ALIM DOS; A 539—In Inflor-alogy, XV. 46, 47—mensuration of, XIV 506—refraction by, XVI 561, 562 —Nicol's prism, I 913; XIV 789, XVI 649—method of cutting it from crystal, XIV 751

Pusmatic spectrum See Spectrum. Prismoid, mensuration of, XIV 506

Prison, Prison discipling, XVIII 564
—prisons in China, VI 568—Edinburgh,
VIII 404—London, XIII. 678—New
York, XVI. 221—Paris, XVII 284
Belgium, IV 614—Richmond pententiary, in Dublin, VIII 220, 221—Howard's reforms in, XI. 783—diet of, VIII 22-state of, XIV 444. See Penitentiary .

Prisoners, in England, VIII 748—proportion of, to the population, 749 PRISREND, town in Turkey, XVIII 587. Pristacanthus, genus of fossil fishes, XII.

Pristidæ, family of fishes, XII 327. Pristigaster, genus of fishes, XII. 237. Pristigenys, genus of fossil fishes, XII

PRISTINA, town in Turkey, XVIII. 587. Pristipphorus, genus of fishes, XII. 325. Pristipoma, genus of fishes, XII 286-

Pristipomoides, genus of fishes, XII 286 Pristis, genus of fishes, XII 327—fossil,

Pristiurus, genus of fishes, XII 323 Pritchard (Mr), on the feeding of infusoria with coloured substances, III. 208, n. 2—his work on animalcules, 212—his microscope, XIV. 763—his diamond lens, 760—his sapphire lens, 767—on doublets, 773, 774—his triplet, 775—his compound microscope, 780—on the oxy-hydrogen microscope, 793—on test objects for the microscope, 802, 803-list of objects for, 806.

Pritchett (Mr), his rifle ball, XI. 101. PRITZWALK, in Prussia, XVIII 587. PRIVAS, town in France, XVIII 587. PRIVATEER, XVIII. 587; XVI. 159. Privet, plant, XVII. 761.

Privileges of universities, XXI. 453 et PRIVITZ, town in Hungary, XVIII. 587. PRIVY-COUNCIL, XVIII 587—their grants for education, XV. 822.

Prize courts of the Admiralty, II. 146.

Prize-money, XVI. 114. Prizes in universities, XXI 464 et seq. Proa, kind of boat, IV. 800.

PROBABILITY, XVIII. 588of, I. 223—doctrine of, 819; XIII. 223—Laplace's improvements in its investigation, I. 819; XIII. 282—of testimony and design, I. 820—as a guide

# PRO-PRO

to discovery, ib -- probabilities of life, III 245-Bernoullis' work on, IV. 673 See Chance, Combination

Probang, invention of, XX. 815
Probate of a will, XVIII 637—duties on, XXI 65, 66

Probation, XXI 197

PROBLEM, XVIII 637—problems in algebra, II 538—resolution of geometrical, 542—in geometry, X 508, 526—of the three bodies, III 809; IV 105, I 828 -inverse problem, in perspective, XVII 449-in practical astronomy, IV 110-Petersburg problem, XVIII 601 Proboscidea, family of mammalia, XIV 194

Proboscideæ, division of insects, IX 224. Proboscis of bees, IV 571

Probus (Marcus Aurelius) XVIII 637, XIX 349—his government of Egypt, VIII 473.

-(Valerius), on punctuation, XVIII 686

– (Æmilius), XVI. 149 PROCACCINI, family of Italian artists, XVIII 637

-(Camillo), XVIII 637 (Carlo Antonio), XVIII 638. (Ercole), XVIII 637 (GIULIO CESARE), XVIII 637

Procellana, genus of birds, XVI 811. Procerus, genus of insects, IX 96 Process, in anatomy, II 825

Prochaska (George), on the injectible and non-injectible parts of the body, II 806—on the bram, 818—as the seat of the mental faculties, XVII. 558, 559—on the ruseles, II 821—on the nerves, 814—on the sensorium commune, XVII.

Prochilodus, genus of fishes, XII 216 PROCIDA (Giovanni di), XVIII. 638; XX. 258; X. 13.

-, island, XVIII 638. PROCLAMATION, XVIII 638
PROCLUS, XVIII. 638; X. 502; XVII

Proceias, genus of birds, XVI 751 Procedus, fossil teptiles, XVII 152. Proconsul, XVIII. 630, 645; XIX 315 Procopius, XVIII 630; VII. 300; XIV. 455; XIII 28.

Procris, genus of insects, IX 210. PROGRUSTES, XVIII 639. PROCTOR, XVIII. 639

-, in universities, XVIII. 630-Oxford, XXI. 456 PROGURATOR-FISCAL, XVIII 639

Procurators, in universities, XXI. 416 Procyon, genus of mammalia, XIV. 154teeth of, XVI. 462

Propicus, sophist, XVIII, 639. Producta, genus of fossil mollusks, XVII. 105.

Productidæ, family of fossil mollusks, XV. 338; XVII 105.

Production of wealth, XVIII 224 Professions, their influence on health, XIV. 442.

Professor, XVII. 639 — professors at Paris, XXI 448—Bologna, 451—Ox-ford, 457—Queen's University, Dublin, 489.

Professorships at Oxford, XXI. 457; Cambridge, 463; St Andrews, 476; Glasgow, 478; Abordeen, 481; Edinburgh, 484; Dublin, 487.

Profits of trade, VII. 196-of mercantile speculation, 197—gross and nett profits, XII. 425; XVIII. 240—effect of, on rate ofinterest, XII. 425-advantage of high, XVIII. 233-their rate the true test of the advantage of employments, 238—equality of, 210—vary inversely as wages, 250—effect of the fluctuation of wages on, ib -definition and theory of 252-circumstances which occasion a rise or fall of, ib .- extra profits, 253influence of the decreasing fertility of the soil on, 254-taxes on, XXI. 45may be lowered by taxes on raw pro-

PROGRAMME, XVIII. 689.

duce. 64.

### PRO-PRO

Progression, XVIII 639-arithmetical, II 500-muscles used in, III 42

PROJECTILES, XVIII 639, I 888-resistance of the air to, XVIII 67-possibility of a projectile from the moon reaching the earth, XIV 635—Borda on, V 36, 37. See Gunnery

PROJECTION OF THE SPHERE, XVIII 639 —orthographic and stereographic, X 488, 489—globular, 491—Flamsteed's, 493—construction of maps by, 488
——in mechanics, XIV. 413—parallel

projection of figures, 382-of systems of forces, 383

in perspective, XVIII. 639—of points, XVII 445—of straight and curved lines, 446, 447—in reference to drawings in joinery, XII. 806

PROLATION, XVIII 639 PROLEGOMENA, XVIII 640.

Prolixity of style, occasions when useful, VIII 233

PROLOGUE, XVIII 640. PROME, town in India, XVIII 610, V.

617, 784

Promerops, genus of birds, XVI. 771 Prometheans, matches, XIV. 351. PROMETHEUS, XVIII 640

Promise, duty of performance of a, XV.

Promissory notes, IX 416
PROMONTORY, XVIII, 610; X. 483
— of the ear, III 46

Promotion, in the army, VII. 202. Prompten, in theatres, XVIII 610 Pronzens, genus of insects, 1X. 195 PRONAOS, XVIII 640; III. 512.

PRONOUN, XVIII 640 , X 754, 789-relatave, 757—in Egyptian grammar, XI.
422, 426—Condillae on the, VII 235.
Pronuba, name of Juno, XIII. 20.
PROSY (G. C. F. M. R. de), French engi-

neer, XVIII 640, L. 800, n. - his friction dynamometer, ib.—on running water, XII. 73, 145—his work on logarithms, XIII 555.

PROOF, XVIII. 610-in jurasprudence, XIII 275. See Evidence.

— in printing, XVIII. 542.
— of guns, VI. 179; XI. 97; XX. 214.

Proof-houses, XI. 97.

Propagation of plants, V. 167; XI. 693, 702—of the pine apple, 732—of trees and shrubs, XVII 767 Proper motion of stars, I 815

Proper motion of stars, 1 (18)
Proper to (Sextas Aurelius), XVIII.
640—poetry of, XVIII 105.
Property, XVIII. 611—necessity of existence of, VIII. 370—real property in
England and Wales, 718, 754—laws regarding real and personal, 782, 783 --a basis of law, XIII. 25d—injurious to, XIV. 427—should private property at sea he exempt from attack during war? XVI. 158 -effects of security to, XVIII. 227—utility of a right of, 228—its effect on the progress of population, 345— right of, 357.

(Literary.) See Copyright.
Property-tax, V. 600; XXI. 53, 56--unfair and unjust, 56 PROPHECY, XVIII. 641-various ways of

fulfilment of, 11.79. Prophetic office of Christ, XXI, 215,

Prophets, Druidical, VIII. 189 -division by the Jews of the Old Testament prophets into classes, IV. 694 -indications of a future state in the books of the Old Testament prophets, I. 474-Mohammed as a prophet, XV. 302.

Propolis of bots, IV. 576.
Propolis of bots, IV. 576.
Propoleron, XVIII. 641; XIV. 311.
Propoleron, XVIII. 641- in algebra, IV. 500—in arithmetic, lb.; III. 501, 592—geometry, II. 501; X. 505; proportions of ferros, 510, propolitions of figures, 519- problems respecting, 528. See Progression.

-- harmonical or musical, XVIII. 641.

Proportionals, X. 517-proportional compasses, VII. 221.

Proposition, in geometry, XVIII. 641;

### PRO-PRO

X 508, 547-in logic, XIII 573, 574doctrine of, 583-affirmative and negative, 583-propositions of constitution, 587—interpretation of, ib ,589—conjunctive, 629, 630—hypothetical, 590, 629, 630, 631—disjunctive, ib.—exclusive,

Preprætor, XIX 315 Proprietary insurance companies, XII 408

Propriety, VII 248 Propterus, genus of fossil fishes, XII 335

Propulsion, in mechanics, XIV. 413 Propylæum, III 462, 512-propylæa in ancient Athens, IV 165, 167, n 1.

Propylon, III 512 Proscenium, in architecture, III. 512the Greek theatres, VIII 135. Proscopia, genus of insects, IX 158
PROSE, XVIII 641, XIX 105—romance,
XIX 262—principles of prose style,

140-Milton's, XV 29. Proselytes, I 488, and n. Prosenchyma, tissue in plants, V 66 PROSERPINE, XVIII 641, VI 387; VIII

PROSLAMBANOMENOS, XVIII 641. PROSODY, XVIII 642; X 744 Prosopite, mineral, XV. 93 Prosoponiscus, genus of fossils, XVII

630—a planet, IV 91

102 Prosoporcia, XVIII 642; XVII 444 Prossnitz, town in Austria, XVIII 642.

Prostate gland, III 70 Prostitutes, in the London theatres, VIII 169

Prostitution, XIV 441-among the Bazeegurs, IV 525—in India, XI 470—police of, XVIII 190—connection between it and crime, ib

Prostomis, genus of insects, IX 148 PROSTYLE, XVIII 642; III 512. Protagoras, XVIII. 642; XX 872 Protaster, fossil star-fish, XVII. 99 Proteaces, nat. ord of plants, V. 204; IV 261

PROTECTIONISTS, XVIII 642-their legislation in regard to the wool trade, XXI

Proteine, II 382; IX 757. Proteinus, genus of insects, IX 194. Protemys, fossil chelonian, XVII. 153

PROTESTANT, XVIII 642-French protestants, X 268—persecution of in France, 31, 32—in Holland, XI. 562, 588—their intolerance towards the Catholics in the ntolerance towards the Catholics in the leign of James I., V. 887—persecution of in Mary's reign, VIII 710—origin of the name, XIII 735; XVIII. 822— churches in Europe, IX 894—import-ance of philology to, XVII. 541—in Prussia, XVIII 650, 658, 664—war with the Emperor of Germany, 825. See Reformation

Protestant Association, V 491 Proteus Angunus, XIII 460, X 587; XVII. 183; XIX. 14,84—dental characters of, XVI 430.

-, genus of animalcules, III. 200. Protichnites, XVII 130, 131
Proto, fossil mollusks, XVII 110 Protochloride of iron and tin, VIII. 317
PROTOGENES, Greek painter, XVIII 642;
XVII. 55, 57—his intercourse with Apelles, III. 291. Protogine, XV. 137.

Protonesians, people, IX. 347. Protoplasm, V. 67

Protopteri, order of fishes, XII 318 Protornis, genus of fossil birds, XVII

Protorosaurus, fossil reptiles, XVII 140. Protovrgularia, fossils, XVII. 101. Portoxide of iron, VI. 489—of nitrogen,

Protozoa, XVII 92 PROTRACTOR, instrument, XVIII 642. Proustite, mineral, XV, 122. Proust, aeronaut, II 177.

PROUT (Samuel), painter, XVIII 642. -(WILLIAM), physician, XVIII. 648

# PRO-PRY

—his law regarding chemical combina-tions, VI 442—Budgewater Treatise, V 364

Provençal language, IX 391, XIII 213— poetry, XVII 108, 115—spoken in Marseille, XIV 317

PROVENCE, in France, XVIII 643, X. 277 PROVERB, XVIII 643.

PROVERBS, The Book of, XVIII 643targums on, XXI 24

Providence, excluded from the Aristote-lian system of philosophy, III 546 extraordinary providence under which the Israelites were placed, I 470, distinguished from ordinary providences, 471-careless use of the word providen-

tral, 473 and ncapital of Rhode Island, XVIII
645; XIX 146, 147
PROVINCE WELLESLEY, in the Malay

Peninsula, XVIII 645

PROVINCIA, XVIII 645

PROVINS, town of Fiance, XVIII 646 Provis (W A), on the flow of water in pipes, XII 76, 136

Provisions, preservation of, IX 766-conrovisions, preservation ti, Ix. 100 coarses sumption of, in London, XIII. 664, Paris, XVII 284; Glasgow, X 654—Irish provision trade, XII 521—preserved, for the navy, XX 24 Dietetics, Food Provost, XVIII 646

Provostaye, on the circular polarization of heat, XVI 683

Prudence, Amstotle on, III 563, 565 PRUDENTIUS (A. Clemeus), poet, XVIII

Prudhom, painter, XVII 76 Prudhomme on the victims of the first French revolution, X 92, n 2

Prudhon (C J), his communistic schemes, VII 213

Pruning, in gardening, XI 696
Prunner(Leonard de), his work on insects,

Prunus, genus of plants, V. 191
Prusias, king of Bithynia, XVII 410
PRUSSIA, XVIII 646; IX 402—Royal Academy of Sciences, II 64—army, III. 640—wars with Austria, IV 808—diet at Erfurth convened by, 308—policy of Austria towards, 1b—invasion of Holland in 1787, V 526-invasion of France in 1792, 543, 544—subsidized by Britain in 1794, 553—war with France in 1806, 601-mutability of her political power, 614-her troops at Waterloo, 618, 619conduct of, in regard to Hanover, X 141, 142 — trade with England, VIII 732, 733—coal in, VII 126, 127—iron ores, XII 541-Jews m, 783-language, XIII 215 — coins of, XV. 442, 444— births and deaths in, 623—produce of its mines, 248-monarchy, 414-education in, \$16, 828 - newspapers, XVI. 201-increase of population, 342-registration of births, &c., XVIII 842—railway statistics, 787—alliance with Russia against France, XIX. 492-Savings-banks, 673 - postal system, XVIII. 424—production of silk, XX. 278-conduct of, in regard to the slave trade, 323 - animal magnetism, 444proportion of suicides in, 800—weights and measures, XXI. 813—factory legislation in, 791—trades-schools of, 823 voluntary starvation of a Prussian recruit, VIII. 23—map of Prussia, recruit, VIII

\_\_\_\_\_, province, XVIII 676
Prussian blue, VI. 474—dyeing with, VIII 319-used to colour tea-leaves,

VIII 319—used to colour tendesyes, IX 769, XXI 87.
—— grass, XI 742
Prussic-and, VI. 474—its poisonous properhes, XIV 487, XVIII. 127, 128, 130, 188—plants producing, V 191 See Hydrocyanic acid

Pruth, river, XV. 312; XVIL 647; XIX. 515—treaty of the, XIX 481. Pryme (Abraham de la), his account of Sir Isaac Newton, XVI. 206, n. 2.

Prymnothonus, genus of fishes, XII. 282.

# PRY—PSY

PRYNNE (William), XVIII 676, V 894prosecution of, IV 713-Hume's mjustice to, ib -on the drama, VIII 145his opposition to the stage, XXI 169 PRYTANES, XVIII 677—of Athens, IV 215

Prytaneium, in ancient Athens, IV 163 PRZEMYSL, town in Austria, XVIII 677 PRZIBRAM, town in Bohemia, XVIII, 677 PSALMANAZAR (George), XVIII. 677

PSALMODY, XVIII 678 PSALMS, the Book of, XVIII 678-of David, 97-Horne's Commentary on, XI. 631—targums on, XXI 24

Psalter, Fust and Schoeffer's, XVIII 529 —the Mentz psalter, 530—Roman and Gallican, IV 701—of the Virgin, V. 5. Psammetius, XI 389

Psammenitus, ancient Egyptian king, VIII 465

Psammis, Egyptian king, VIII 464; XI 389 PSAMMITICHUS, kings of Egypt, XVIII

680, VIII 464 Psammobia, genus of mollusks, XV 350,

341, 347 Psaminodius, genus of insects, IX 120

Psammodus, genus of fossil fishes, XII

Psammœcus, genus of insects, IX 147 Psammolepis, genus of fossil fishes, XII.

Psammoperca, genus of fishes, XII 275 Psammophis genus of scrpents, XIX 57 Psammosteus, genus of fossil fishes, XII 337, XVII 125

Psaris, genus of birds, XVI 748 Psarus, genus of insects, IX 238 Pselaphu, family of insects, IX 152 Pselaphus, genus of insects, IX 153 PSELLUS (M Constantinus), XVIII 680 -on demons, III 809, n

Psen, genus of insects, IX 196 Psenes, genus of fishes, XII 298. Psettus, genus of fishes, XII 801, 302. Pseudo. XVIII 680. Pseudobdella, genus of annelides, XI

Pseudo-bombyces, section of insects, IX Pseudoblenmus, genus of fishes, XII

309 Pseudochromidae, family of fishes, XII 288

Pseudochromis, genus of fishes, XII. 288 Pseudocrinus, fossil echinoderins, XVII 98, 99

Pseudodipteral, in architecture, III 512 Pseudo-Jonathan on the Pentateuch. XXI 23

Pseudoliva, fossil mollusks, XVII. 110 rseudomorphism, in crystals, XVI. 110
Pseudomorphism, in crystals, XV. 54
Pseudomymous, XVIII 680.
— Books, IV. 711.
Pseudo-peripteral, III. 512.
Pseudo-prostyle, III 512

Pseudopus, genus of serpents, XIX 41. Psila, genus of insects, IX 252
Psilomelane, mineral, XV 111.
Psilopus, genus of insects, IX 243. Psilota, genus of insects, IX 240. Psittacara, genus of birds, XVI 780. Psittaculus, genus of birds, XVI 783. Psittacus, genus of birds, XVI 780, 783 Pskov, in Russia, XVIII 680, XIX 521. Psoa, genus of insects, IX. 142 Psochus, genus of insects, IX 180.
Psolus, fossil holothurioides, XVII, 100. Psophia, genus of birds, XVI 798. Psolidae, echinoderms, XXI 986 Psyche, XVIII. 681—planet, IV. 91. Psychoda, genus of insects, IX. 226.

PSYCHOLOGY, XVIII. 681; XIV. 555, 556 —the real in, 616—relation between it and logic, XIII 567—phrenological, XVII 561—psychological arrangement

orin psychological arrangement of phrenology, ib medicine, XIV. 468—Pythagoras' psychological notions, XVIII 711—psychological proof of the existence of God, XXI. 187

Psylla, genus of insects, IX. 170. Psylli, XIX. 45, 65.

# PSY-PUB

Psyra, island, laid waste in 1824, XI 28 Ptah, Egyptian deity, VIII 487 Ptarmigans, birds, XVI 791, IX 762shooting of, XX 226

Pterachs, genus of fishes, XII 298. Pterichthys, genus of fossil fishes, XII 338, XVII 129, XIX 453

Pterinea, fossil mollusks, XVII 106
Pterocera, mollusks, XV 388—fossil,
XVII 109

Pterochile, genus of insects, IX 197. Pterocles, genus of birds, XVI 791. Pterodactylus, III 88, XVII 151, 640. Pteroglossus, genus of birds, XVI 779 Pterois, genus of fishes, XII 283 Pteromys, genus of mammalia, XIV 178 Pteroperna, fossil mollusks, XVII 106 Pterophorites, section of insects, IX 219 Pterophorus, genus of insects, IX 219 Pteroplatea, genus of fishes, XII 328 Pteropoda, mollusks, XV 357, 332-fossil, xvîi iii

Pteropus, genus of mammalia, XIV 147

—dentition of, XVI 452 Pterosauria, fossil reptiles, XVII 151, 154 Pterotheca, fossil mollusks, XVII 111 Pterygocephalus, genus of fossil fishes,

Pterygotus, fossils, XVII 101, 102. Ptilinus, genus of insects, IX 111. Ptilodictya, fossil animals, XVII 96, 98 Ptilopora, fossil animals, XVII 96, 98. Ptimores, tribe of insects, IX 111.
Ptimus, genus of insects, IX 111
PTOLEMÆUS (Claudius), ancient astrono-

mer, XVIII 681-his improvements in arithmetic, I. 702—his astronomical tables corrected by Alphonso, king of Castile, 600-lns astronomy, 198, 199; III 792; IV 53, 79, 80; its overthrow, III 797—Arabian translation of his works, 794—on refraction, IV 9—cli-mates, VI. 766, 707—his system of geography, X 466—on geometry, 501—his reference to Ireland, XII 792—on optics,

XVI 521; XIII 440; I 620—on the boundaries of Syra, XX 901
PTOLEMIES (The), XVIII 081—hieroglyphical symbols of the name, XI 890, and n. 6

Ptolemy Soter, king of Egypt, VIII 468— science encounaged by, II 751, III. 789, X 500; XIV 452.

I Pinladelphus, VIII. 468—his love of science, II 751, III 780; X 500; XIV 452—Alexandria embellished by, II 469.

by, II 409.

III, Euergetos, VIII 468—his visit to Jerusalem, XII. 732

IV, Philopator, VIII. 469—his visit to Jerusalem, XII 732.

V., Epiphanes, VIII. 469.

VI, Philometor, VIII. 469.

VII, Physcon, VIII. 469, 470—his crucities at Alexandria, II 470.

VIII., Lathyrus, VIII. 470.

X., Alexander II., VIII 470.

XI, Auletes, VIII. 470, 471.

XII, VIII. 471.

- XII , VIII. 471. - XIII , VIII 471.

Ptyacanthus, genus of fossil fishes, XVII

Ptychacanthus, genus of fossil fishes, XII. 939 Ptychoceras, fossil mollusks, XVII. 530.

Ptychodus, genus of fossil fishes, XII. 840. Ptycholepis, genus of fossil fishes, XII

335. Ptychoptera, genus of insects, IX. 227.

Ptyodactyli, reptiles, XIX 86. Puberty, XIV 425; XVII. 688. Pubis (08), III. 12.

PUBLICOLA (Publius Valerius), XVIII.

Public works, employment of convicts at, XVIII. 583-in the United States, XXI. 431.

Publilian laws, XIX. 804. Publishers, value set on dramatic pieces by, XXI. 172.

Publishing of books, VII. 356.

PUB-PUM Publius (Syrus), an ancient writer of Pumpkin, XVIII 685, V. 193. farces, XVIII 681 Puce-colour, dyeing of, VIII 313 PUCHBUDRA, town in India, XVIII 681 Puddingstone, XV. 141 Puddling, in iron manufacture, XII 553 —of canals, XVI 57 PUEBLA, in Mexico, XVIII 681, XIV 724, 718—Indians of, IX. 847 - DE DON FADRIQUE, town in Spain, XVIII 681 DE MONTALVAN, town in Spain, XVIII 681 PUENTE GENIL, town in Spain, XVIII 681 Puerperal mania, XIV 530 Puerto-bello, taken by Admiral Vernon, V. 458 CABELLO, in Venezuela, XVIII 682, IV 817, 819, XI 612 d'Espana, in Trinidad, XVIII 375 DE-Santa-Maria, town in Spain, XVIII 681 · Llano, town in Spain, XVIII 682 · Principe, town in Cuba, XVIII 682 La Mar, IV 827. - Plata, XI. 254 Puff-ball, its soporific qualities, VI 629 Puff-birds, XVI. 779 PUFFENDORF (Samuel), jurist and historian, XVIII 682; I. 88, n. Puffins, birds, XVI. 810; IX. 762—Manx puffin, XIV. 243 Puffinus, genus of birds, XVI. 812. Pugatschef, VI 336. Puger (Pieire), XVIII, 682 Pughe (Wm. Owen), XVIII 688 Pugin (Augustus), architect, XVIII 683 (A WELBY NORTHMORE), XVIII 683—his specimens of pointed architec-ture, III 457, principles of, 490—his design for a Romish church, 506. Pugha, in the kingdom of Naples, XX Pugnani (Gaetano), violinist, XVIII 683 Pugnet (M.) on the plague, XVII. 748 et Puharrees, XI. 467. Puiscaux, blind man of, IV. 780 Pul, III 778. Porci (Luigi), poet, XVIII. 684; VIII 250—poetry of, XVIII 110. Pulein (Robert), XXI 452. Pulex, genus of insects, IX 260
Pulgar (Fernando del), historian, XVIII. Pulkowa, observatory at, I 861; III 820 Pullicat handkerchiefs, manufacture of, VII. 449—folding of, VI. 93 Pulmonata, order of mollusks, XV. 373. Pulmonifeia, fossil mollusks, XV. 403; XVII 108, 111. Pulo Way, or Ay, island, IV. 409—P Rondo, 1b —P Pisang, 1b. PULPIT, XVIII. 684 Pulque, Mexican beverage, V 318, XIV. Pulse, XVIII. 684; XVII 661-effects of electricity on, VIII. 602—of the horse, XXI. 551, n 5 -, leguminous plants, V 190 glass, XX 556
Pultava, XVIII. 263—battle of, XIX 480; PULTENEY (William), Earl of Bath, XVIII 684. ——— (Sir William), XXI. 145. Pulteneytown, XXI. 857. PULTUER, Russian town, XVIII. 685. Pulvinated, in architecture, III 512. Pulvinites, fossil mollusks, XVII. 106 Puma, XIV. 170; II. 713; VI. 549; XVII. 630, 633 Pumice-stone, XV. 72, 132—its resistance to pressure, XX. 718.
Pumced-foot, XXI 561.
PUMP, XVIII. 685, 24, 49; XII. 174, et seq —Galileo's observation on, IV. 449
—Bramah's, V. 278, 274—for collieries. VII 120. See Air-pump. Pump-aræometer, III. 392.

Pumping-engines, XX. 611.

### PUM—PUS

Pun, XVIII 685 PUNCH, XVIII 685

-, in the drama, origin of, VIII 148 Suffolk, breed of horses, II 338: XX 790

PUNCTUATION, XVIII 685—in shorthand writing, XX. 679. See Commaa, Semicolon, etc

Punderpoor, town in India, XVIII 686

Punic language, XIII 209

wars, VI 286 et seq —first, XIX 309-second, 310

Punishments, XVIII 686; VII 506 XIV 445—Beccaria on, IV 556—o heresy, VII 483—doctrine of, XIII 275—the principle on which acts are to be selected for, 276—primary and secondary qualities of, 277—capital and other punishments in United Kingdom, VIII 750-in the navy, XVI 101, 107-temporal, under the Mosaic dispensation, I. 470, 471, 472, 473, 478—of suicide, XX 801—forgery, IX 784 See Crime, Law. Prison Discipline

(future), described in the popular mythology of the Greeks and Romans, I 459-not revealed in Old Testament 473, 477-not one of the sanctions of the Mosaic law, 479; but one of the sanctions of the New Testament dis-

pensation, 481. See Future Lafe
PUNJAB, XVIII 687—its rivers, XVII
006—sepoy insurrection in, XVI 308,
309—annexed to the British possessions, V 670; XI 500

Punjnud, river, XII 878. Punnau, town in India, XVIII 695 Puno, in Peru, XVIII. 695, XVII. 474 Punt, IV. 800.

Punt-shooting, XX 217. Pupa, genus of mollusks, XV 373

——, of insects, IX 53 Pupil of the eye, XIII 461; XVII 678its contractions, III 44-in various animals, 97.

Pupivora, family of insects, IX 184 Purbach (George), XVIII 605—his astro-nomical labours, I 600, III 796—his -mathematidivision of the radius, 578-

cal investigations of, X. 504.

PURBECK, XVIII. 605—quarrics, VIII. 111

—beds, XV. 208—fossil insects of,
XVII. 105; mammals, 161

PURCELL (Henry), musician, XVIII. 695. PURCHAS (Samuel), XVIII. 695. Purfleet powder magazine, VI. 351.

Purgatives for domestic animals, XXI. 556, n 1.

PURGATORY, XVIII 605, 836.
PURITANS, XVIII 606, XII. 368; VIII.
712—under James I, V. 382—their hostility to the stage, VIII 160; XXI 160—of New England, XXI 432. See Nonconformists

Purkinje on the cylinder axis, II. 810-on the structure of the teeth, XVI. 407, 409 on the effect of galvanism on the eye, XXI. 634

Purlins, XIX 387—best manner of fram-ing, VI. 259

Purmann, German surgeon, XX. 818

Purneau, in Bengal, XVIII 696
Purple, dyeing of, VIII 311, 319—Tyrian, 272, 273; XXI 406—for printing with, XVIII 556.

Purpura, genus of mollusks, XV. 366-dye from, VIII 272. Purpure, in heraldry, XI. 324.

Purpurina, fossil mollusks, XVII 109. Purre, bird, XVI. 808

PURSER, or Paymaster (Ships), XVIII. 696; XVI 105, 110, 114, 115 Purslane, plant, XI. 745-order of plants,

V. 193. Purveyance, levying of, II 253, 254. Pus, in medicine, XVII 652—pus-cells,

Puschkinite, mineral, XV. 85. Pusey (Mr), on carts, II. 279—on portable thrashing machines, 281—on the agri-cultural implements of the Great Exhi-

bition, 285-on irrigation, XII. 619.

### PUS-PYR

Pushkin (A Sergejewitsh), Russian poet, XVIII. 696 Putamen, in botany, V 135. PUTEOLI, XVIII 697 PUTIVL, Russian town, XVIII 697. PUTNEY, in Surrey, XVIII 697. PUTREFACTION, XVIII 697, IX 766substances which resist, III 277, IX 767—influence of electricity on, VIII

PUTTEE, town in India, XVIII 697. PUTTEEALA, town in India, XVIII. 697. Putting, game, XI 170 PUTTUM, town in India, XVIII 607
PUTTY, XVIII 607, V 756; X 669, PUTTY, XVIII 697, 670

Puy (Le), town in France, XVIII 697 Puy-de-Dome, in France, XVIII 697. PUYLAURENS, town in France, XVIII

Puysegur (Marquis de), XX 413-magnetic somnambulism discovered by, 421 et

(Count Maxime de), mesmenst, XX 423

PUZZUOLI, XVIII 698, 697 PWILITELI, in Wales, XVIII 698, VI 55 Pycnite, mineral, XV 88

Pycnodontei, family of fossil fishes, XII 337, 350, XVII 125, 126 Pyenodus, genus of fossil fishes, XII 337, XVII 126

Pycnogonum, genus of Arachmides, III 386

PYCNOSTYLE, XVIII. 698; III. 512 Pydna, XIII. 763—battle of, XIX. 314; XI 12.

Pygæus, genus of fossil fishes, XII 345 Pygaster, fossil echidnoidea, XVII. 99,

Promation, XVIII 698; VI 280 Pygocentrus, genus of fishes, XII. 247 Pygopristis, genus of fishes, XII 247 Pygopterus, gonus of fossil lishes, XII 335, XVII 125.

PYLADES, XVIII 698; XVI 708. -, dancer, XVIII. 608, IV. 308 Pyloric appendages, in fishes, III. 111 PYLUS, or Pylos, ancient town of Messina, XVIII 698; IV. 205; XV. 831

PYM (John), XVIII. 690 , V 387, 400, 401. PYNAKIR (Adam), landscape painter, XVIII 700.

Pynson (Richard), printer, XVIII 537. Pyralis, genus of insects, IX. 216 Pyrallolite, mineral, XV 82.

Pyramid, in geometry, X. 335—how to develope, XII. 807—mensuration of, XIV. 507—in mineralogy, XV. 41 et

Pyramids of Egypt, XVIII 700, 111, 436, 437, 451, 457; VIII. 454, 455, 500, 501—attempt to pull them down, II. 29 battle of, VIII. 488-probably intended for gnomons, X. 464.

– of Mexico, XIV. 719. – octagonal, construction of, III. 410 Pyramidal bodies of the brain, III. 55. Pyramidellidæ, family of mollusks, XV.

Pyranga, genus of birds, XVI. 751. Pyrargillite, mineral, XV. 89. Pyrargyrite, mineral, XV. 121 PYRENEES, mountains, XVIII. 700; III. 893; IX. 382; XVII 595; XX. 486 climate, 488—carriage roads over, III. 393—botany of, V. 227—height of the, XVII 642—campaign of the, XXI. 820.

AVII 042—campaign of the AA1, 220.

— Basses, a department of France,

XVIII. 701; X 242

— HAUTES, XVIII. 701; X. 242.

— Orienvales, XVIII. 702; X. 242.

Pyreneite, mineral, XV 85.

Pyrgita, genus of birds, XVI 760. Pyrgos, aqueduct of, III. 334.
Pyrina, fossil cchinoidea, XVII. 100.
PYRITES, XVIII. 702; XV. 114, 115—iron, VI. 490; crystallization of, VII. 557—copper, VI 496—tin, XV. 121—gold in, VI 499—sulphur from, XV. 246—in Devonshire, VII. 768.

Pyritonema, fossils, XVII. 96. PYRITZ, town in Prussia, XVIII. 702.

# PYR-QUA Pyrmont, mineral waters of, XV. 38

Pyrochlore, mineral, XV 91. Pyrochica, genus of insects, IX 133 Pyrochroides, tribe of insects, IX. 193 Pyrodon, genus of fishes, XII 313 Pyro-electricity, VIII 529, 557 Pyro-gallic acid, VIII 281 Pyrolaces, nat ord of plants, V. 198 Pyroligneous acid, its power of preserving animal food, IX 767 Pyrolusite, mineral, XV 111 Pyromaney, VIII 54 Pyromania, XIV. 532. Pyrometer, XVIII 702—invention of, 1 762—Bionguiarts', XVIII 444 Pyromorphite, mineral, XV. 105 Pyrope, XV 98—in Fifeshire, IX. 541 Pyrophorus, XIV 351. Pyrophyllite, mineral, XV 79 Pyrophymathe, mineral, XV 88. Pyrosciente, mineral, XV 88. Pyrosciente, mineral, XV 80 Pyroscope, VI 783; I. 769. Pyrosmalite, mineral, XV 79. Pyrosoma, mollusks, XV. 334-their luminosity, ib , XVII 574 Pyrosomide, family of mollusks, XV. 334. Pyrotecury, XVIII. 706—school of, in Belgium, IV. 622 Pyrothite, mineral, XV 90. Pyroxene, mineral, XV 81 Pyranica, or Pyrrhic dance, XVIII 708, VII 495, 645 Pyrinte, mineral, XV. 91 PYRRIO, sceptic, XVIII 708; XIX. 707 Pyrrhocotax, genus of birds, XVI. 754. Pyrrhosaderite, mmeral, XV 108. Pyrrhotine, mmeral, XV 115. Pyrrhula, genus of birds, XVI. 761 Pyrrhulina, genus of fishes, XII 251.
Pyrhulins, king of Fighrus, XVIII. 708—his
war with the Romans, XIX 305—death
of, 306—his conduct in Sielly, XX. 000. Pyrula, genus of mollusks, XV. 387-fossil, XVII. 110.

Pyrus, genus of trees, XVII. 763. Pyrusagenas, XVIII 700; X. 497, XIV. 451; XX. 810—philosophy of, 111 538; XVII 231—on the mystical properties of numbers, III. 575; XVII. 232, and n.—astronomy, III. 788—abstinence from beans enjoined by, IV. 527-many of his doctrines derived from India, 271-his residence at Crotona, VII. 521 -resemblance between his philosophy and that of the Druids, VIII. 185-his esotoric and exoteric scholars, IX 382 -doctrine of the metempsy chosis, X IV. 628-treatment of mental discases, 527 -on vision, XIII. 449; XVI. 521-Philolaus on the dectrines of, XVII. 

-mathematical theory of the universe, XVII. 800.

AVII. 800.
PYTHEAS, ancient navigator, XVIII. 712, 161, n. 2—on astronomy, III. 780—his voyages, fb; X. 402.
PYTHIA, XVIII. 712; VII. 700; XVI. 698.
PYTHIAS, GAMES, XVIII. 712; X. 397.
Pythias, VII. 642.

Pythina, fossil mollusks, XVII. 107.

Pytho, genus of insects, IX. 132. Python, fabled serpent destroyed by Appollo, III. 209 - in zoology, XVII 634; IL 744;

IX. 62, 60. Pythoness, priestess of Apollo, VII. 709. See Pythia.

Pyx, trial of the, XVIII. 812; III. 766, 767—process of pyxing, VII. 94. Pyxidium, in botany, V. 186.

# Q

Q, letter of the alphabet, XVIII. 718in abbreviations, II. 20. Quabenus (Zacharias), his burning mirrors, VI. 11. Quack doctors, XIV. 464, 465.

# QUA-QUA

QUADI, XVIII 713, VII 306-marvellous story of a Roman victory over the, III 280

QUADRANGLE, XVIII 713 Quadrans, Roman coin, VII 67.

QUADRANT, XVIII 718, X 485, 518-Davis', IV. 351-mural, 153, XV 688-Hadley's, I 748, XVI 30-telescopes applied to quadrants, III 802-causes

of error in the use of, XVI 32 QUADRANTAL, XVIII 713 QUADRATIC EQUATIONS, XVIII 718; II

Quadratrix, XX 521

QUADRATURE, XVIII 713—of the circle, I 699, 700, X 530, XX 520—in astronomy, XVIII 713

Quadratus, apologist in the primitive church, IX 491

QUADRICA, XVIII 713.

Quadrilatera, family of crustacea, VII 541

Quadrilateral figure, to find the area of, XIV 504—bone in birds, III 85 Quadrimani, section of insects, IX. 88. Quadrio (F Xaverio), XVIII 713 Quadroon, XIV 719

Quadrumana, in zoology, XIV. 185, 186 II 774; XVII. 681—of America, II 712—their bones, III 75 et seq —muscles, 91—teeth, 105; XVI. 455 et seq —sto-mach, III 108

Quadrupeds, characters of, II 773-kinds used as food, IX 761 See Mammalia

QUADRUPLE, XVIII 714 - Alliance, V 455. Quæstor, XVIII 714 Quagga, XIV 201.

QUAIL, XVIII. 714; XVI 797; VIII 483; IX. 762—of Scripture, XVII 192

—fighting with, VII. 51
QUAINI (Luigh), painter, XVIII. 714.
Quain (Richard), his works on anatomy, II 767, 770—on fatty degeneration XVII 696

- (Jones), his work on anatomy, II 770; III 74

QUARERS, XVIII 714—their affirmation equal in law to an oath, II 200; XVI 399—their address to James II., V 484 -their opposition to slavery and the slave trade, 527, XX. 321—registration of their marriages, XVIII 834—Bar-clay's Apology for, IV 442—places of worship in Scotland, XIX 801 See Barclay (Robert), Fox (Geo ), Penn (William).

QUANG-SI, in China, XVIII. 724 QUANG-TON, in China, XVIII. 724. Quans, Lapland race, XIII. 237

QUANTITY, in prosody, XVIII. 724—in algebra, II. 489 et seq—the idea of quantities infinitely great and small first introduced into Geometry by Kepler, I. 554—in logic, XIII 569. Quantock hills, XX 410.

QUARANTINE, XVIII 724 — establishments, XIV. 445—laws, XVII. 749, 751. QUARLES (Francis), XVIII 724—his poetry, 122.

Quarndon, chalybeate spring, near Derby, VII. 755.

QUARRY, stone, XVIII 725—English quarries, VIII. 726—French, X 251 See Blasting.

hunting phrase, XVIII. 725—11 falconry, 1b; XI 249. Quarrymen, diseases of, XIV 442.

QUART, measure, XVIII. 725. QUARTATION, XVIII. 725.

QUARTER, XVIII 725—quarters of a horse, ib—in astronomy, ib.—in heral-dry, ib.; XI 329—of a ship, ib.

QUARTER-MASTER, XVIII. 725. QUARTER-MASTER-GENERAL, XVIII. 725;

III. 664; XXI 702. Quarter clocks, VII. 17. QUARTERING, in heraldry, XVIII. 725;

XI 325, 339, 340. Quarterly Review, XIX 100—establishment of, 821—on languages, XIII. 197—on the character of Horne Tooke,

XXI. 809-Gifford's editorship of, X.

# QUA-QUE

622, Lockhart's, XI 549-Isaac d'Israeh's contributions to, XII 631 QUARTETTO, in music, XVIII. 725; XV

Quartz, XV 68-common, ferruginous, and spongiform, 69—optical phenomena of, I 910, XVI 538, 600, 627, 652, 677 -specific gravity of, XII 88.

— rock, or Quartzite, XV. 158—in Scotland, XIX 792, 793 Quasdanovich (General), XV. 787. Quassia, order of plants, V. 189 Quaternions, in geometry, I 918, n 3 Quatre-Bras, XVIII 725—battle of, IV

597: V. 619 Quatrefages (M), on mollusks, XV 357 on the value of alpaca wool, XXI

Quatre-foil, in heraldry, III 512; XI 326

QUATREMERE-DE-QUINCY (A C), XVIII 725-his work on the Olympian Jupiter, XIX 855

QUATUORVIR, XVIII 725 QUAVER, in music, XVIII 725.

Quays, on tidal rivers, XVI 79. QUEBEC, XVIII 725—chinate, II 673, 674—taken by General Wolfe, V 464, VI 133, XXI 434—population, VI 144—trade of, 148
QUEDAH, XVIII 726

QUEDLINBURG, town in Prussia, XVIII 727.

- beet, XX 796

QUEEN, XVIII. 727 — Queen-dowager, VIII 121

QUEEN ANNE'S BOUNTY, XVIII. 727. Queen-bee, IV 571, 580

QUEEN-CHARLOTTE-ISLANDS, IN Australia. XVIII. 727; IV 265

Queen Charlotte's Sound, in New Zealand, XVI 234, 235

QUEEN'S COLLEGES, XVIII 727; VIII 228; XII 532, XXI 489 — COUNTY, XVIII 727; XII 508, 509, 515, 517

University, in Ireland, VIII 223, XII. 532, XXI 489

- ware, XVIII 434 QUEENSFERRY, South, XVIII 730-North, IX 795-ferry at, 797 QUEENSTOWN, in Cork, XVIII 730; VII

871 Quekett (Mr), his list of test objects,

XIV 804 QUELPAERT, ISland, XVIII 730

Quenstedt, his definition of theology, XXI 181—on the divine attributes,

QUENTIN (St), in France, XVIII. 730—cotton manufactures of, X. 253—canal of, 244,

Querard (M), his list of Laplace's works, XIII 282 Quercitrin, VIII. 296

Quercitron-bark, yellow dye-stuff, IV 445; VIII. 296, 318—for wool, 297 QUERETARO, in Mexico, XVIII 730, XIV. 718, 728—proportion of baptisms and burials in, XVIII 842.

QUERINI (Angelo Maria), cardinal, XVIII 730.

Querquedula, genus of birds, XVI. 819. Querula, genus of birds, XVI 750.

QUESADA, town in Spain, XVIII 781 QUESALTENANGO, in Guatemala, XVIII 731; XI. 76, 77.

QUESNAY (François), XVIII 731; VIII. 875—on the vibration of the nerves, I 171 n on political economy, XVIII. 220, 221—his intimacy with Adam Smith, XX. 340—on the incidence of taxes, XXI 40

Quesne (Abraham), Marquis de, admiral. XVIII 734 - his expedition against Algiers, II 571

(Fort du), V 463.
Quesnel, his moral observations on the New Testament, XII. 686.

Quesnoy (Francisco di), sculptor, XIX

Quetelet (M.), on the electricity of clouds, VIII. 581-on magnetism, XIV 14, 66

# QUE-QUO

on the population of the Netherlands, XV 620, 634, 644 — on the time of flowering in plants, XVII. 625—on the proportion of suicides in different countries, XX 800—on temperature, XVII 625

QUEUE, in heraldry, XVIII. 784 QUEVEDO Y VILLEGAS (F Gomez de), XVIII 734—poetry of, 115—his romance, XIX 286

Quezal, bird, XVI 779 Quiberon, British expedition to X 97peninsula of, XV 577 Quichua language, II 680, XIII 223 Quichuas, IX 348

Quick-lime, as a deodorizer, XIX 621

Quicksilver See Mercury Quid-pro-quo, XVIII 735 Quibtism, XVIII 735, XV 757 QUILIMANE, or Kilimane, XVIII 735, XV 669

QUILLET (Claude), XVIII 735 QUILLOTA, town in Chili, XVIII 735department of, VI 547 QUILOA, town in Zanquebar, XVIII 735.

QUILON, town in India, XVIII 735 QUIMPER, town in France, XVIII 735 QUIMPERLE, town in France, XVIII

QUIN (James), tragedian, XVIII 735, XXI. 175—his friendship to Thomson,

- (Dr), his imitation of ancient gems, XXI 33 Quinarius, coin, XVIII 786; XVI 383. Quinatzin, Mexican king, XIV 699 QUINAULT (Philippe), poet, XVIII 736

Quince, V. 191—culture of, XI 716 Quince-trees, XVII 764 Quincey (Mr de), Life of Pope in this work by, XVIII 320, n 1

Quincunx, in gardening, XVIII 736 Quincy, town in Massachussets, XVIII 736

-, town in Illinois, XVIII 736. QUINDECAGON, XVIII 786. QUINDECEMVIRI, XVIII 786; VII 690 Quindiu, one of the Andes, III 131-pass of, II 668

Quinet, on Paulus' theory respecting miracles, XV 268, n 1
QUININE, XVIII 786; V 196; VI 518,

725-as a remedy for ague, XII 436 QUINQUATRUS, or Quinquatria, festival, XVIII 736.

Quinqueremis, XVIII 736 Quinquina tree, Condamine's account of, VII 230

QUINQUIVIRI, XVIII 736 QUINTANA (M Joseph), Spanish poet, XVIII. 786—on Moorish ballads, 113

QUINTANAR DE LA ORDEN, town in Spain, XVIII 737 QUINTETTO, in music, XVIII. 787.

QUINTILIANUS (M Fabius), XVIII 737-Capperonnier's edition of, V. 787; Burman's edution, ib; Rollin's, XIX 251—Spalding's, XX. 495—on painting, XVII. 51, 81—on ancient sculpture, XIX 850

QUINTUS SMYRNÆUS, or Q Calaber, Greek poet, XVIII. 738. Quipu, a substitute for writing among the

Peruvians, XVII 462. Quirinal Hill, XIX 356, 357.

Quirinus, I 458

QUIRITES, XVIII 738; XIX 316-origin of the name, VII. 591

Quiros (Pedro Fernandez de), his voyage of discovery, IV 252—discoveries of, 265; XVIII 181.

Quito, XVIII 788clivation of its site, XVII 598—volcanoes enclosing the plan of, ib.—height of its mountains, 645 Quittor, XXI 560.

Quiver, III. 427. Quixote (Don), VI 619—Smollett's trans-lation of, XX. 361. See Cervantes. Quoins, in architecture, III. 512; V. 740 Quorra. See Niger

QUORUM, XVIII. 738. Quoy on the mollusca, XV. 827.

# R-RAD

# ${ m R}$

R, letter of the alphabet, XVIII. 739—in abbreviations, ib; II. 20. Ra, Egyptian deity, VIII. 437. RAAB, town in Hungary, XVIII 739. RAAT, town in Bengal, XVIII 739. RABATT, town in Morocco, XVIII 739, XV.

Rabbet of the keel, in ship-building, XX. 185

Rabbi, XVIII 739—stipend allowed to, in France, XII 782 See Jews.

Rabbinical language, XIII. 209 - Bible, XIX. 835.

RABBIT, XVIII. 739; XIV. 188—realing and management of, II. 356—as food, IX. 762—teeth of, XVI. 454, 455—skins, X. 349, 351-shooting of, XX. 223

Rabboth-Moab, rums of, XVII 189.
RABELAIS (Dr François), XVIII 739—
his resemblance to Aristophanes, VIII. 129

RABENER (G Wilhelm), satirist, XVIII. 743.

Rabies, or canine madness, XXI. 575. Raby Castle, VIII 267

RACCONIGI, town in Italy, XVIII 743
RACE-HORSE, XVIII 743, XI 633, 662—
speed of, VII 230, XI 643—action of, 642-race-riding, 686; at Newmarket,

XVI 176—duty on, XIII 435 RACES OF MAN, XVIII. 743; II. 775; V. 373; XIX. 607—in Sindh, XX. 305 See Ethnology.

- or roosts, in the sea, cause of, XI.

Raceme, in botany, V 114. Rachamach, bii d, XVI. 740. RACHEL, tigedienne, XVIII 743. Rachis, in botany, V. 113. RACINE (Jean), poet, XVIII 743 — his

friendship with Boileau, IV. 814-dia-

mate works of, VIII 155
—town in Wisconsin, XVIII 748.
RACING, XVIII. 746; XI 686—betting on horse-racing, X. 395—among the Greeks,

RACK, instrument of torture, XVIII. 746. Rackett (M1), on the Lymington shimp, VII. 543.

Racle (M), on iron bridges, XII. 578. Racoma, genus of fishes, XII 257. Racom, XIV 154—teeth of, XVI 462 its fur, X. 349

RACZ-KEVE, town in Hungary, XVIII. 747. Radama, king of Madagascar, XIII. 792. RADCLIFFE (Ann Ward), XVIII. 747—her 10mances, XIX. 276.

- (Dr Joun), XVIII. 747-Radcliffe Library founded by, XVII. 85—his ludicrous method of emptying abscess in the fauces, XX. 827, n. - Library, XIII. 396; XVII. 35;

XIX. 445. - (Mr), his machine for dressing cotton cloth, VII. 451.

- Observatory, III. 817 RADETZEX DE RADETZ (Count Joseph), field-marshal, XVIII 747—his proceed-ings in Italy, XII 656, 657, 658.

RADHUNPOOR, in India, XVIII. 747. Radiant heat, I. 800, 801, 942, 952; XI. 262—law of emanation of, 944, 947 growing importance of the subject, 943 influence of colour on, 945 - De la Roche on, 954-recent observations on, 955—polarisation of, 909, 956. See

Leslie (Sin John)
Radiata, IX. 60; II 772—characteristics and classes of, III. 192-arrangement of, in zones at various depths, IX. 778
-number known, XVII. 681 - fossil,

Radiated polypes, XXI. 1002. Radiation of cold, XI. 264.
terrestrial, XIV. 644—fogs, 654. Radicals, in chemistry, VI. 502. Radicle, of plants, V. 76.

# RAD-RAI

Rediolite, mineral, XV. 75 Radiolites, fossil mollusks, XVII 107 Radish, culture of the, XI 740—horseradish, 745.

RADIUS, XVIII. 748-in geometry, X 513 bone, in man, III 32-in the mammalia, 81—in reptiles, 88—in birds, 86. —— vector, VIII. 358; X. 543

RADNORSHIRE, XVIII. 748 -population and value of property, VIII 754
RADOM, town in Poland, XVIII 749.

Radzivil (Prince), XVIII. 145, 150 Rae (Dr), fate of Sir John Franklin and his party discovered by, X 298; XVIII 175-his northern explorations, 169, 172, 174

Rác Bareli, town in Oude, XVII 17. RAEBURN (Sir Henry), portiait-painter, XVIII 749.

RAEGANJ, town in India, XVIII 751 RAFFAELLE (Sanzio), XVIII 750, XVII 57 n. 2, 62, 67-his style of architecture, III 452, of painting, 708, 709—cartoons of, VI. 304—genius of, VIII 171—specimen of sketches by, VIII Plate— Vaga generally reckoned his best pupil, XXI 503

- ware, XVIII 432. RAFFLES (Sir T. Stamford), XVIII 750on the origin of the population of the Indian Archipelago, III, 748—on Batavia, IV 496—governor of Java, XII 709—

institution at Singapore established by, XX 307.

Rafflesia Arnoldi, V. 209—discovery of, XVIII 751.

Rafflesiaceæ, nat. order of plants, V 209 Rafn (Dr), XIX. 696-on the earliest discoverers of America, II. 698, n 3—on the early Norwegian settlements in Greenland, ib; XI 39, n.

Rafters, in carpentry, VI 264-best form of, XIX 382

Rafts, life, XIII. 439. Rag-fallowing, II 307.

RAGLAN (J. H. F Somersei), baron, XVIII. 751; XXI 875, XIX. 501, 503-death of, 509.

- Castle, XV. 499. RAGMAN'S ROLL, XVIII. 751.

Ragoba, XI. 491 Ragotski, his alliance with Sweden, XX 851—defeated and killed by the Turks

Rags, bleaching of, IV. 770—paper made from, XVII. 251—quantity imported, VIII 735.

Ragstone hills, XIII 64 Ragusa, in Dalmatia, XVIII. 751.

m Sielly, XVIII. 751.
Rahbek (Knud Lyne), Danish author, XIX. 694.

Raia, genus of fishes, XII. 327-R. Lemprieri, 207, 220, 325.

Raise, sub-order of fishes, XII 326 Raiatea, island, XXI. 871.

Raindæ, family of fishes, XII. 327-fossil, XVII. 119.

RAIKES (Robert), XVIII. 751-first Sunday-school originated with, VIII 746. Ralls, in joinery, V. 751, 752; XII. 814— in railways, XVIII. 754—ongin of the term, 752—edge, 753—fish-belly, ib.— bridge, 754—double-headed, 755, 756 fish-joint, 757-saddle-back or Barlow,

758.

RAILWAYS, XVIII. 752-origin of, I. 884locomotive adapted to, ib -speculations on, in 1825, ib .- their superiority to common roads, ib.—practicability of high velocities on, 885—their influence on agriculture, II. 264—rickyard railways, 268-portable farm, 280-viaducts of, IIL 339 (see Iron Bridges)-in collieries, VII. 125 - influence on dairy husbandry, 662—as joint-stock com-panies, XII. 818—iron arches and bridges for, 588 et seg.—Egyptian rail-way bridges, 609—their superiority to swift canal boats, XVI 58—conveyance of mails by, XVIII 415-railway postoffices, 416-roofs over railway stations, XIX. 395 et seg.-railway springs, XX.

# RAI-RAL

96-city railroads in New York, XVI 225, Philadelphia, XVII 510-termini in London, XIII 679; Edinburgh, VIII 394, 411, Birmingham, IV 732; Dun-394, 411, Simmigram, 17 37, Sun-dee, VIII 257—in Austria, IV. 315— Bengal, 651—Bombay, V. 3—Belgium, IV 626—Bavana, 517—Chili, VI 552— Canada, 155-connected with Montreal XV 523-in England, VIII 722-Scotland, XIX 808—France, X. 217, 244— Norway, XVI. 332—Holland, XI 582— Incland, XII 528-Portugal, XVIII 398 —Prussia, 670—Two Sicilies, XX 250— Spain, 491—the Punjab, XVIII. 698 kingdom of Saidmia, XIX 637-Russia, 536 -- connected with Sheffield, XX. 97 -- Sweden, 864-Switzerland, 890connected with Stirling, 701; with Sidney, New South Wales, 896—formulas for the resistance of engines and trains on, 615—suicides on, 800—in United States, XXI 427—in Turkey, 384—application of electro-magnetism to railway-breaks, 644 See the different counties in England and Scotland, the different states of North America; and the geographical articles in general, Tunnel, Locomotive, Steam-Engine, Stations, Stephenson, Watt, &c.

RAIMBACH (Abraham), engraver, XVIII 799

Rain, XIV 656-in America, II 672-decreases from the equator to the poles, VI 784—rare in Egypt, VIII. 422, be-come more frequent since the cultivation of the palm-tree, XVII. 614-laws which regulate the distribution of, 613-circumstances which produce a high and low average fall, 1b., 614-between the tropics, ib -influences unfavourable to, ib.-rainless districts, ib.-why prognosticated by fall of the barometer, IV. 459; XVIII 26-its influence on rocks, XV. 139-impressions of rain-drops in rocks, XVII 131-fall of, in England, VIII. 718; France, X. 241, Orkney, XVI. 720—among the Himalayas, XL 446—Prussia, XVIII 662—of frogs, XIX 76

Rain-gauge, XIV. 656.
RAINBOW, XVIII. 799; XIII. 449; XIV. 679; XVI. 525, 526, 531, 687—method by which its nature was ascertained, I -speculations of Maurolycus respecting it, 625—discovery of Antonio de Dominis, ib.—theory of, 898—spurious bows, lb—coloured fringes, 899; XIV. -delicacy of its phenomena as a test of theory, I 899-colours of, VI. 615colours of supernumerary, 648-polarisation of, XVI. 688.

Rainey (Mr), on the ocean mail service of the United States, XVIII. 426

Rainhill, competition of locomotives at, L.

RAISINS, XVIII. 799-of Malaga, XIV 107 -quantity imported into Britain, VIII.

Raja, family of fossil fishes, XIL 341. RAJAH, Indian title, XVIII. 799. RAJAHMUNDRY, in India, XVIII 799
RAJESHAYE, in India, XVIII 800.
RAJMAHAL, town in India, XVIII 800.
RAJFEEFLA, Indian state, XVIII 800. RAJPOOTANA, in India, XVIII. 800.

Rajpoots, XI 464, 465-in Jeypoor, XIL. 784-in Oude, XVII. 19. See Rajpootana

Roke, horse, II. 279.

of a ship, XVIII. 801. Rakeburg (J.), his work on insects, IX. 23. Raking mouldings, XII. 808.

RAKKA, Turkish town, XVIII. 801. RALEIGH (Sir Walter), XVIII. 801; IV. 335; VIII. 718—execution of, V. 384 fond of chess, VI. 538-his attempts to colonise America, 247-his notice of the Waraws, IX. 249—on the ships of the Normans, XVI. 80—on English ships, 92—on shipping, XX. 125—his work on the Royal Navy quoted, 126—trading voyage to America, 127-his intimacy with Spenser, 506.

# RAL-RAN

Ralf (Mr), his work on Desmidieze, III. 212.

Ralling, Swedish senator, XX 857. Rallius, genus of birds, XVI 807 Ralmien (M), his seismograph, XXI. 644. Ram Island, III 284

RAMADAN, Mohammedan fast, XVIII 802, IV 375, XV 303, XX. 908 Ramage (Mi), on the atmosphere of the moon, IV. 43, 44

Râmâyana, Indian epic poem, XVII. 520translation of, 529

Ramazzini (Bernardino), his work on the diseases of artificers, XIV 423 RAMBERVILLERS, town in France, XVIII 802

RAMBLA, town in Spain, XVIII 802 RAMBOUILLET, town in France, XVIII. 802 -flock of merinos at, X. 248

Rambui (J. P), his works on insects, IX. 17.

Rameau's theory of harmony, XV. 701 Rameaux on the temperature of plants, V. 169

RAMESES, kings of Egypt, XVIII. 802; VIII 461, 462, 463—statue of Rameses, II. 509-tomb of Rameses III., 513 Sec Sesostria.

Rameseum of El-Kurneh, VIII 509, XIII. 381-musical sounds from, XIV 492 RAMGURH, in India, XVIII 802 Ramillies, battle of, V. 449.

Ramiro II, XX 462 Rammelsbergite, mineral, XV 116. RAMMORUN ROY (Rajah), XVIII. 802. RAMNAD, town in Madias, XVIII 803. RAMPANT, in heraldry, XVIII 803, XI. 332.

RAMPART, XVIII. 803; IX. 813, 819. Ramphastos, genus of buds, XVI. 779. Ramphoceles, genus of birds, XVI. 751. Ramphorhynchus, fossil reptiles, XVII.

Rampion, V. 198-culture of, XI. 743 RAMPOOR, in India, XVIII 803 Rams, Leicester, IL 345—letting of, 346price of Cheviot rams, 347 See Sheep RAMSAY (Allan), XVIII. 803; VIII. 403—

his manner of editing old poetry, VII. 634—edict of the Town-council of Edinburgh regarding the sale of his works, 357, n. 1—his Monk and the Millet's Wife, VIII. 250-poetry of, XVIII. 124. (Andrew Michael), XVIII 803.

(Prof.), on agrarian laws, IL 246, (Prof ), on geology, XV. 181, 182, n. Ramsbotham's wool-combing machine, XXI, 925.

Ramsbottom (Mr), on salmon fry, IX. 502, 593. n. 2.

RAMSDEN (Jesse), optician, XVIII. 804the quadrant and sextant improved by, I. 749—his dividing machine, ib; X. 742—his optical instruments, III. 808 hisbalance, IV. 384-optigraph, VI 119micrometers, XIV. 748, 749-his method of testing the expansion of measuring rods, XVIII. 703-his eye-piece for telescopes, XXI. 124, 125, n .- theodolite by, 331-zenith sector, ib, 335.

Ramsey (David), his patent for ships, XX. 636.

- in Huntingdon, XVIII. 804 town in Isle of Man, AVIII. 804; XIV. 245, 246.

RAMSGATE, town in Kent, XVIII. 804—foundation of its pler laid by means of a diving-bell, VII. 64-population, XIII.

RAMUS (Petrus), XVIII. 804; I. 80, 708— on Euclid, IX. 365—on syllogisms, XIII.

RAMUSIO (Giambattista), XVIII. 805; 164. Rana, repille, XIX. 76—bones of, III. 86 et seq.—ears, 99—tongue, 100.

Ranatra, genus of insects, IX. 165. Randall (Mr), on the school system of New York, XV. 820.

RANDERS, town in Denmark, XVIII 806.
RANDOLFH (Thomas), poet, XVIII 805.
regent of Scotland, XIX. 756. RANDOM SHOT, XVIII. 806. RANGE, in gunnery, XVIII. 806; XI. 148-

# RAN-RAT

English tables of ranges, 146-French,

RANGER of a forest, XVIII 800 RANGOON, XVIII 806—taken by the British in 1825, V 646, 783 Raniceps, genus of fishes, XII 270-genus of fossil reptiles, XVII 136

Ramdæ, family of reptiles, XIX 75. Ranjit Singh, XVIII 692, 693

RANK, XVIII 806—relations of, among animals, III. 187—in China, VI 587, 594—inequality of, necessary, VIII 376, XX 318—distinction of, XVI. 280—in Russia, XIX. 524 See Caste.

- in the navy, XVI 102-army, VII.

- AND FILE, XVIII 806.

Rankine (Piof), on the mechanical theory of heat, XX. 560-on the specific heat of the air, 561-his formula representing the relation between the pressure and temperature of steam, 566-on the density of steam, 569-his work on the steam-engine and other prime movers, 617, 619—his formula for the work of gascous steam, 623; of dry saturated steam, 624, 625—on the heat of combustion of coal, 630—on the temperature of the products of combustion of coal, 632-his formula for expressing the efficiency of a furnace, 63 L

Rannoch (Loch), AVII. 455. Ransom, of knights, XIII. 113. Ransome's plough, II. 271.

- artificial stone, XX. 735-his application for protecting the surface of stones, ib. RANTLES, XVIII 806; XIV. 694.

Ranunculacese, nat. order of plants, V 140 -actid and narcotic species, XIV 439. Ranunculus, culture of, XI. 752. Ranville (Gueron), X 196 et seq. RANZ DES VACHES, XVIII 806. Ranzani on biids, XVI. 731, 800 RAOUL ROCHLTTE (Desire), XVIII. 806.

Rapacious birds See Raptores. RAPE, crime, XVIII. 806; XIV. 128 - oll, XVI. 495, 497. - plant, II. 321, 336.

Rape-cake, a manure, II. 301-analysis of, 405.

Raper (Capt.), on the Himalaya mountains, XI. 448. Raphael. See Raffaelle.

Raphic, in botany, V. 133. Raphics, or crystals, in plants, V. 74. Raphidia, genus of insects, IX. 179. Raphilite, mineral, XV. 81.
Raphilstema, fossil reptiles, XVII. 152.
Raphistema, fossil moliusks, XVII. 110. RAPHOR, Irish town, XVIII. 807; VIII.

RAPIN (Paul de), historian, XVIII. 807. Rapp (General), X. 133. Rappee, snuff, XXI. 295, 297.

106.

Raptores, order of birds, XVI. 737; XVII. 633-of Europe, 824. Raratonga, island, XVIII. 279-mission-

aries in, XXL 871-New Testament in the language of, ib. Rascians, in Hungary, XII. 11. Rascrad, Turkish town, XVIII. 807.

RASSIGNAD, Identification, XVIII. 507; KASS. (1820mus Christian), XVIII. 507; XIX. 696—his labours in philology, XVII. 528, 529, 534, 535—on Anglo-Saxon literature, VIII. 793, Rasores, order of birds, XVI. 784.

Raspberry, culture of, XI. 718. Rasse, in zoology, XIV. 167. Rassova, Turkish town, XVIII. 809; VII.

RASTADT, town in Baden, XVIII. 809-negotiations at, in 1798, V. 503-mur-

der of the French ambassador at. X. RASTALL (John), XVIII. 809.

RASTENBURG, town in Prussis, XVIII. 809. Rastrelli, architect, buildings in Peters-burg creeted by, XVII. 486, 491. Rastrites, graptolites, XVII. 96. Rat, XVIII. 800; XIV. 181—rats in Ja-

maica, XIL 682; in India, Xi. 456—spiny-rat, XIV. 180—water-rat, 183—

# RAT-RAY

musk-rat, 1b.; its fur, X. 348-means of destroying rats, XXI 548. RATAFIA, XVIII 809.

RATCHET, XVIII. 809; VIL 14, 15; XIV 400

Ratcliffe, treason of, V. 504 Ratel, quadruped, XIV. 156.

RATES, in the navy, XVIII. 809; XVI 94, 95 -- church-rates, pool-rates (see these articles).

RATHANGAN, Irish town, XVIII. 809. Rathbone (Wilham), VII 477, n. RATHDOWNEY, Irish town, XVIII. 809 RATHENOW, town in Prussia, XVIII 809 -engagement at, 649

Rathke (Heinrich), on the crustacea, VIL 540, 544,

RATHKEALE, Insh town, XVIII. 809. Rathlin, island, III 284.

RATIBOR, town in Prussia, XVIII. 809
RATIO, XVIII. 809; X 517-in logarithms, XIII. 557—ratios of musical intervals; see Music, Temperament.

RATION, XVIII 809 RATIONALISM, XVIII. 810
RATISBON, XVIII 810, IV 518
RATLINES Of a ship, XVIII. 810.
Rattails in horses, XXL 579 RATTANS, XVIII 810.

Rattle-snakes, XVII. 634; XIX 54, 68—poison of, 45—skull and teeth of, XVI 432—poison-fangs, ib —their bite poison ous. XIV. 440

Rattler, steam-ship, trials of screw-pro-pellers in, XX. 640, 659—description of, 665

Rattoons, XX, 792.

Ratzeburg (J. T. C), his work on insects, IX. 24.

Rau, Dutch surgeon, XX. 818 RAUCH (Christian), sculptor, XVIII. 810
Raucourt (M), on the velocity of rivers, XII. 144

Rauschel on the arteries, II. 790. RAVAILLIAC (François), assassin, XVIII.

811; X. 84

RAVELIN, XVIII 811; IX. 818 Raven, XVL 764 Ravenel's hive, III. 295.

RAVENGLASS, town in Cumberland, XVIII. 811.

RAVENNA, XVIII. 811; XVII. 241, 243the Goths at, XII. 640-taken by the Lombards, XIII. 641-recovered by the Venetians, ib. - recession of the sea from, XIX. 207.

Ravensbourne, river, XIII. 65. RAVENSBURG, XVIII. 812. Ravenscroft, dramatist, XXI. 171.

Ravensworth Castle, VIII 267. Ravi, or Ravee, river in the Punjab, XVIII.

687, 688; XIL 69; XIII. 158. Raw produce, value of, VII. 386, XIV. 273-effects of a bounty on the exportation of, VII. 387-effects of the subdivision of land in the price of, 427price of, increased by small farms, 429 -taxes on, XXI. 63, possible effects of, on wages and profits, 64.

Rawandians, II. 599. RAWITSCH, or Rawicz, town in Prussia. XVIII. 812.

Rawlmson (Sir H. C.), his discovery of the mode of interpreting cuneiform characters, IX. 361; XI. 369; XVII. 580, 584 on the tabular libraries of Assyria, XIII. 382-on Echatana, VIII. 370-on the capital of Assyria, XVI. 275-his Herodotus, XVIL 433.

(Rev George), on the language of the Pelasgi, XVII. 371.

RAY (John), XVIII. 812; XIV 461—on Scotch agriculture, II. 258—his natural method of classifying plants, V. 178on fishes, XII. 205—on the mammalia XIV. 125—his high scientific and personal character, ib.—on birds, XVI. 726—his works on insects, IX. 8—his book on proverbs, XVIII. 643—on the bran-lin or par, IX. 594—his intimacy with Sir Hans Sloane, XX 332. in optics, XIII. 450, 452.

Light, Spectrum, Optics.

### RAY-REC

Rayger (Dr Charles), on a swarm of ants at Posen, III 265.

RAYMOND OF SEBONDE, XVIII 813-Montaigne's Apology for, I. 51—his Theologia Naturalis, ib, 52—Turnebus and Grotius's opinion of, 52, n. 3

— (G. M.), on singing, XV 719.
Raymundus de Penyafort, VI. 189.
RAYNAL (G. T. François), XVIII 813—on

the effects of the discovery of America, and of a passage to India by Cape of Good Hope, I. 19—Diderot's literary aid to, VIII 15

Raynonard on the Roman languages, XVII. 528

Rays, fishes, XII. 325—fossil, XVII 119 Razor-shells, XV 350

Razors, manufacture of, VII 600. Razoumoffskin, mineral, XV. 84

Razzi (G. Antonio), painter, XVIII 813 Ré, island, VI 422—Egyptian deity XI

382—or Reis, coin, XV. 486.
Reacting machines, XII 172
Reaction, in dynamics, VIII 324—universal reaction a law of the material world, 364

Read (Mr), on the electricity of vegetable bodies, VIII. 570—his electrical conductors, 608-on atmospheric electricity, XIV. 660

Read's subsoil pulveriser, II 271. Reade (Dr Joseph), his permanent soap-bubble, XVI 600—his iriscope, 603

— (Rev J. B), his niks, XII 383— his photographic process, XVII. 545 READING, town in Berkshire, XVIII. 814; V 403.

in Pennsylvania, XVIII. 814
Readings, various, of Scripture, laws for determining, XIX. 841—dramatic reading, XXL 172

REAL, XVIII 814-in metaphysics, XIV. 611-theories of, not founded on consciousness, ib -as given in consciousness, 613—in cosmology, 615—in psy-chology, 616—in theology, 619—in morality, 622-in the philosophy of taste, 623

- Spanish coin, XVIII. 814; XV 445.

REALEJO, in Nicaragua, XVIII. 814; XVI. 244.

Realgar, VI. 495; XV 122. REALISM, XVIII. 814. See Nominalists and Realists

REAMUR (R A. F. Sieur de), XVIII, 815 his report on silk-producing spiders, III 875—on the bee, IV. 571—on the shape of bells, 628—his patronage of Brisson, V 368—his work on insects, IX. 4, XIV. 125—Reaumur's porcelain, XVIII. 444—his thermometer, XXI 222, 223-on echinoderms, XXI 992, 993

Reapers, wages of, II 313; XIX. 455. Reaping, with the sickle, II. 313-with

machinery, 314.
—— machines, II. 276—reports on, 1b., 277. REASON, XVIII 814; XV 811-extension

of the term to the moral faculties, I 347—distinguished from instinct, XII 392-Jacobi's idea of, 668--law of, XIII. 253—in relation to Christianity, I. 516; XVI. 298; XVIII. 810—Kant on, XIII 48, 49-Leibnitz on a sufficient reason. See Leibnitz.

Reasoning, XIV. 593; XIII 601 REATE, city of the Sabines, XVIII. 815. Reay, country of, XX. 840. Rebate, in joinery, XII. 808. REBEC, musical instrument, XVIII, 815.

Rebecca insurrection in Wales, VI. 53. Rebellion, Scotch, in 1715, V. 458; in 1745, 460—Irish, in 1798, 563 (see Monmouth, O'Neile)—Chinese, VL 597.

Rebiting, in engraving, VIII. 804. REBUS. XVIII. 815. RECANATI, Italian city, XVIII. 816. Receptacle, in botany, V. 118. Recife, XVII 415; V. 295. Reciprocal equations, II. 522. RECITATIVO, in music, XVIII. 816. RECKONING (Ship's), XVIII. 816; XVI. 25.

XXI. 888.

### REC—REE

Reclaiming of moorlands, II. 358-bogs, 361-fens, 363-land, from the sea, 1b, from rivers, XVI 83 Recoil, wheels of, XII 172.

RECORDE (Robert), XVIII 816; I. 708 and n. 1; X 504—on algebra, I. 558, II 485

RECORDER, XVIII 816 Recording machines, XIV 415. RECORDS (Public), XVIII 816. Recruiting, in Austria, IV 317-Egypt, VIII 515-France, III. 639, 642-Spain, 643—Prussia, 647—Russia, 649—Bavaria, 652—Turkey, 658—Mr Wynd-

ham's Act, V. 599. Rectangle, X. 508-to find the area of, XIV. 502

Rectification of the circle, XX. 520

Rectitude, XV. 541-a real quality, 1b foundation of, 543—different theories on, ib et seg -criterion of, 557-how a knowledge of it is acquired, ib -an attribute of God, XXI. 192. RECTOR, XVIII 816; XVII 309—English,

VIII. 743—in universities, XXI. 416, 475, 478, 481

Rectum, in man, III. 61-in animals, 111 -surgical treatment of diseases of, XX

Recupero on an eruption of water from Ætna, II 197

RECURRING SERIES, XVIII 816. Recurvirostra, genus of birds, XVI. 806.

RECUSANTS, XVIII 816. RED, colour, XVIII. 817-dyeing of, VIII.

282, 317-method of dyeing wool, 288; slik, 291; cotton and linen, 292-varieties of, XV 59-for printing, XVIII 556. See Chromatics. band fish, XII 303

Crag, remains of cetacea in, XVII 166

fire, how produced, XVIII. 707. ink, XII 383

lead, XIII 302.

RIVER, XVIII. 817, XIII. 699, XVII. 605, 647.

River. See Halys.
SEA, XVIII. 817—commerce of, III 355—canal of the, VIII. 430—projected ship canal for joining the Mediterranean with, ib -evaporation in, XVII. 571coral formations, 583

Red-deer, XIV. 208; XX. 212—fossil, XVII 171

Red-grouse, XVI 791-shooting, XX. 224. Red-1ag, or Red Robin, disease in wheat, V. 172.

Red-snow, V 75; XI. 43 Redan, IX. 809, 810—at Sevastopol, XIX. 504, attack on, 509, 510. Redbreast, bird, XVI. 755.

Redburn viaduct, Edinburgh and Glasgow Rallway, XVIII. 763, 764. Redditcii, town in Worcester, XVIII 817. REDEMPTION, XVIII 817.

Redgrave (Mr), on the factories of ceramic wares, XVIII. 445—on the French factory law, XXI. 791.

Redi (Francesco), XII. 660-his work on insects, IX. 3.

Redier's dial-marking watch, VII. 35. Redmund's hinges, XI. 532. REDON, town in France, XVIII. 817. REDOUBT, XVIII. 817; IX. 809, 811. Redpole, bird, XVI 761. REDRUTH, town in Cornwall, XVIII. 817.

Redruthite, mineral, XV 118. Redshank, bird, XVI. 805. Redstart, bird, XVI. 755. Redtenbacher (L.), his works on insects,

IX. 22. Reduction, in arithmetic, III. 587 - of fractions, in algebra, II. 494-of decimal fractions, III. 599, 602-of motions and forces, VIII 340-of syllogisms, XIII.

614, 616, 617, 627. REDUPLICATION, in music, XVIII. 820. Reduvius, genus of insects, IX. 158. Redwing, bird, XVI. 751. REE (Lough), XVIII. 820; XIII. 684;

Red (General), XVI. 303.

### REE-REF

Reed, weaver's, XXI. 783. REDFS, coral, XVIII. 820; XXI. 1003. See Coral.

Reeling, of silk, XX 280, 281. REES (Abraham), XVIII. 820

—— (D1 Owen), on cases of insanity in Pentonville Penitentiary, XVIII 581 REETH, town in Yorkshire, XVIII 820 REEVE (Clara), XVIII. 820-character of her 10mances, XIX 276

- (Lovell), his work on conchology, XV. 327.

Refining of iron, XII 553-of sugar, XX. 794.

Reflecting telescopes, XVI 532 (see Tele--microscopes, XIV. 775-glasses, scope)-VI. 1.

REFLECTION OF LIGHT, XVIII 821; XIII. 451; XVI. 544, 553—laws of, I 904; XVI 553—from different kinds of mir-rors, 1b—from disintegrated surfaces, 690-spectra produced by, 612-double reflection, 669-polarisation of light by reflection, 634; I. 902; laws of, XVI. 635, 641; I 912—Attwood on, IV. 233. See Catoptries

of cold, VII. 532, XI. 264—of heat,

I 768; VI 1, XI 262. in mental philosophy, XIV. 555— Descartes' clear conception of that operation of the mind afterwards called reflection, I. 57-the last faculty that unfolds itself, 58-Locke on the ideas resulting from, 110-112-Locke's use of the term, 253, ambiguous meaning he attaches to it, XIV. 560, 562 and n 3, 563, n. 1, 577-definition of by La Harpe, I 116, n.

Reflectors in lighthouses, XIII. 469, 470

ct seg. See Lighthouses.

REFORM, PARLIAMENTARY, XVIII. 821. See Parliament.

Act, VIII. 778; XVII. 292; X. 738—passing of the, V. 663; XVII. 299
—provisions of, V. 660—Sir R Ped's opposition to, XVII. 364

opposition to, XVII. 364

REFORMATION (The), XVIII 821—Burnet's
history of, V. 702—in Demnark, VII.
740—England, VIII 698, 702, 706;
VII. 483—Scotland, XIII. 127; XIX
772 et seq—Holland, XI. 588—Switzerland, XX 885—a consequence of the revival of letters, I. 15-its influence on the progress of society, IX. 396-ex-tended to Ireland, XII. 475-its influence on the progress of medicine, XIV. 459; and on education, XV. 809-supposed to have been hostile to art in England, AVII 77, this opinion unfounded, XIX. 866-destruction of MSS. at the, XVII. 212-connection of mysticism with, XV. 756—conduct of James V. of Scotland in reference to, XIX. 774 —Stuart's history of, in Scotland, XX. 783—opposition to, in Lancashire, XIII. 180 — in Kirkoudbright, 101. See Luther, Knox, &c.

Reformations in religion, I. 524-principal hindrances to, ib.; attaching too much importance to matters not essential, 525, mistaken views of Christian unity, ib 526; dread of innovations, 525, 529—what is meant by reformation of a church, 530-dangers to which reformers are most liable, ib.

Reformatory Schools, in England, XVIII. 202-general results of the system, 203 -in Scotland, 205-Ireland, 208-reformatories for the young, 586-legis-

lative measures regarding, 587. Reformed Presbyterian Church, XVIII. 501-in Russia, XIX. 529.

501—in Russia, XIX. 529.

Refracting telescopes, II. 30—microscopes, XIV. 776—glasses, VI. I. See Telescope.

REFRACTION, XVIII. 830—of light, XIII.
449, 451, 452; XVI. 529, 556—discovery of the true law of, by Snellius, I.
627; XVI. 530; yet claimed by Descartes, ib.; VI. 279—angle of, III.
143—in astronomy, I. 828; IV. 8—theory of, 1b.—law of, 9—observations theory of, ib.—law of, 9—observations of diverse astronomers on, ib.—mode of finding how much the rising of the

#### REF-REG

sun or a star is advanced by, 112—atmospheric refraction in the polar regions, XVII. 584—table of atmospheric refractions, IV 148—separation of colours by, VI 644—laws of extraordinary, 653—double, I. 901; XIII 452; 56, XVI 531, 625; theory of, I 905; XVI 543, production of, 671, by pressure, 542; law of, in crystals, 626 et seq, I 905—Beccaria on, IV 560; polarisation of light by, XVI 633, 542; colours of doubly-refracting substances VI. 655 — Dollond's experiments on, VIII 94—Fermat on, IX 517—table of refractive powers, XVI 558-by prisms, 562-through plane glasses, 563-by spheres, 564-convex lenses, ib -concave lenses, 565-cylindrical lenses, 567 -polarisation of light by, 642 et seq conical, I 918; XVI 548, 656-triple, 546-explanation of simple and double,

Refraction of heat, VI 1, XIII 452, XI 266-double refraction of, 267

Refractors, cylindric, for lighthouses, XIII. 472.

Refrangibility of light, I 748; XVI 578, 579—of heat, I 956 See Refraction. Refrigerators, for cooling wort, V 328-of a still, VIII 47, 49.

REGALIA, XVIII 830.

REGARDANT, in heraldry, XVIII 830; XI 332

REGATTA, XVIII. 830. Regen, m Bavaria, IV 516

Regency of Britain, the Prince of Wales' title to the, V. 531—his appointment to the, 611.

Regeneration, in theology, XXI. 218 REGENT, XVIII. 830-in universities, XXI 448, 455

- bird, XVI 754 Regent's Canal, XIII 662-bridge, XII.

603. - Park, London, XIII 668 REGGIO, town of Naples, XVIII. 830, XIX.

103; XX. 242. town in northern Italy, XVIII. 830.

Regiam Majestatem, XX. 314. REGIFUGIUM, XVIII 831. REGILIUS (Lake of), XVIII 881. REGINEN, XVIII. 831. See Dictotics. REGIMENT, XVIII. 831. See Army.

REGIOMONTANUS, XVIII. 831; VI 82vanced mathematics by his works, f. 551 -introduced inconometry and decupal fractions, ib.; X. 504-his artificial dove, II 166-his improvement of almanacs 598-his division of the radius, III. 578 his astronomical labours, 796; I. 600
his mathematical works, X. 504—Copernicus' admiration of, VII. 348. See

Muller (Johann).
Regions of the human body, III 1-of the head, in phrenology, XVII 565 Regis (Pierre Sylvain), XVIII 831.

Register-barometers, IV 460.

Register-House, Edinburgh, VIII. 396dome of, XIX 388.

Register Office, General, London, XVIII.

Registering thermometers, XXI, 224. Registers, parish, XV. 600; XVIII. 839 differences in those of different countries 850-inferences drawn from, 352-fallacy of mortuary, 855. See Registra-

Registrar-general, XVIII. 834 - superintendent registrars, ib.; of births, deaths, and marriages, ib .- registrars in Scotland, 840.

REGISTRATION (general) of births, baptisms, marriages, &c., XVIII 881—in Belgium, IV 615—births, marriages, and deaths, registered in England, in 1852, VIII. 755, 756.

of DEEDS, XVIII. 842 of letters, XVIII. 417; XXI. 67colonial and foreign, XVIII. 418.

Regium donum, XII. 532. REGNAULT (Henri-Victor), XVIII. 848; I. 954-on the coefficient of the expansion of gases, ib. and n. 4-on the elasticity

# REG-REI

of steam, 958; XX. 558, 559-on latent heat, I 958-on specific heat and hygrometry, 1b -on hydrodynamics, XII 76, 158—on the compressibility of fluids, 78-his condenser hygrometer, 187-his analysis of the mud of the Nile, VIII 425-his analysis of sea-water, XVII 574-on the expansion of mercury, XVIII 702; XXI 221-on salt crystals, XIX 584-on the specific heat of air, XX. 561—his formulas representing the relation between the pressure and temperature of steam, 566-on the latent heat of steam, ib -on gaseous steam, 570-on the thermometer, XXI 223

Regnier (General), V 602
——— de Graaf, anatomist, II 762. Regnier's dynamometer, VIII 365 Regona (L), his works on the silk-worm,

IX. 24 Regula, in architecture, III 512 Regulator of a watch, VII 28 - of gas-

lights, X 421. Regule, in heialdry, XI. 325
REGULUS (M. Athlus), Roman consul,
XVIII 843; XIX. 309; VI 288, 289, 290-his encounter with a huge scrpent,

monk, III 136 genus of buds, XVI. 756.

XIX 63.

sta1, IV. 79 of antimony, cohesion of, XX. 757 Remer, in India, XVIII. 843. Rehoboam, XII. 767.

Reach of Freiberg, on the earth's density, I 835, and n. 1.

REICHA (Anton), XVIII. 843--on musical scales, XV. 708-on melody, 715, 716, 718—on the fugue, 735 and n-musical composition, 739

REICHENAU, in Bohemia, XVIII 843. REICHENBACH, town in Saxony, XVIII.

- town in Prussia, XVIII, 844treaty of, X 162.

(Baion), his odyle theory of mesmeric somnambulism, XX 434-experiments of, 435-notice from a review of his work, ib

(II. T L.), his work on insects, IX. 12.

REIGHENBERG, town in Bohemia, XVIII. 844.

Read (General), his bequest to the University of Edinburgh, XIII. 402; XXL 483. (Dr Thomas), XIX. 1—ambiguity of a passage in his works relative to colour, I 65 n.; and relative to the perception of visible flaure, 66 n .- sense in which he uses the word suggestion, 167, n 2-great object of his inquiry, 218-Dr Adam Ferguson on his works, 219, n. 1-his essays on the Intellectual and on the Active Powers of Man, 222-unfortunate in his choice of the terms common sense and instinct, 403-on analogical reasoning, II. 745—on the difference between anger and resentment, III. 141 on the mental capacity of the blind, IV. 774—on hearing, XIV. 564—attention, 575—imagination, 576—Royer Collard's esteem for his works, XIX 457-his attempted refutation of Hume's arguments, XIX. 709.

- (Thomas), on clocks, VII. 20. - (Sir William), XIX. 3

REIGATE, in Surrey, XIX. 3-firestone of,

Reikiavik, town in Iceland, XII, 199, 200, Reil on the brain, II. 767-on the neuri-Jenna, 808.

REIMARUS (II. Samuel), XIX. 3character of Jesus Christ, XII. 762 and n. 5, 763.

REIMS. See Rheims. Reinaud (M.), on Greek fire and gun-

powder, XL 151.
Rein-deer, XIV. 206; XVII. 632; XVIII.
179; IX. 387—of Greenland, XL 43—
Lapland, XIII. 236, 239, 240—Norway, XVI 824-gadfly of, XIII. 236; migra tions caused by, 240-fossil, XVII. 170,

### REI—REM

Rem-deer moss, or lichen, XIII 235; V 217.

Remeke, a fable, IX 462 REINESIUS (Thomas), XIX. 4
Reinhard, his definition of theology, XXI

REINHOLD (Erasmus), XIX. 4 -- his opinion of Kant's principle called Practical Reason, I 198—his icasons why Kant's Critique of Pure Reason made so great an impression in Germany, ib

 astronomer, III 798. REISKE (Johann Jacob), XIX 4. Reiss on voltaic electricity, XXI 627 Reisseissen on the vessels of the mucous membranes, IL 837 Reiz (F Wolfgang), philologist, XVII

Relands, people of Sumatra, XX. 805. Reland (Aduan), XIX 4

Relations of animals, Lamarck's views on,

Relative pronoun, X 757. Relays, in electric telegraphs, XXI 108, 109, 11.

RELIEF in sculpture, XIX. 4, 845 - in painting, 5-in fortification, IX 798.

- Church, XVIII, 493-union of, with the Secession, 500-places of worship,

in Scotland, XIX. 801.

Religion, XIX 5—of Abyssinia, II 57, 221—Africa, 223—Algiers, 576—Asia, III. 750—Attica, IV. 216—Australia, 297-Austria, 317-Bavana, 519-Bel gium, 616—Bolivia, 829—Brazil, V. 297 —Burmah, 782—Canada, VI 158— Chile, 546-China, 568-United States, XXI. 422 (see the other geographical articles) - operation of conscience in relation to religious systems, I. 427the object of Scripture is to teach religion, 455-introduction of false religions, ib.; crept in gradually, 464—pagan religions, 456—a pagan's reason for holding his religion, 466, and a Christian's, ib -reformations in, 521corrections of almses in, generally resisted or delayed, 537-ancient notion of, III. 545, 546-Aristotle's views of, -employed as an ald to Government, IV 216—arguments of the dissenters in 1772 against articles of faith, V. 474, -liberality and toleration regarding, in Buenos Ayres, 727-union of, with a wallke spirit, in chivalry, VI, 603decay of, during the French revolution, X 81-opposition to its re-establishment in France, 125, n .- ecclesiastical history, XI. 540—religious worship and societies in London, XIII 666—when a state institution, ought to be freely discussed by the press, 372 - passive obedience and non-resistance, once a religious doctrine, 373 - a cause of insanity, XIV. 536-Plato on, XVII. 812-religious aspect of rivers, XIX. 179, 222difference between religious knowledge and theological philosophy, I. 519religion established by law, has not, on that ground, any claim on the conscience, 542-elements of, XMI, 184. See Buddha, Christianity, Devotion, God, Mohammedanism, Mythology, Perscention, Polytheism, Popery, Presbyterianism, Reformation, Roman Catho-lics and Roman Catholicism, Super-stition, Theology, Toleration, Gospel, &c. &c.

Religious education, XV. 812.

- madness, XIV. 533, 536. - missions, XV. 260. See Missions. REMBANG, in Java, XIX. 5. REMBRANDT VAN RHIN, XIX. 5—his pic-tures, III. 711; XVII. 75.

Remesses, XI, 388. Reminiscence, Plate on, XVII. 804. REMIREMONT, French town, XIX. 6.

REMISCHEID, Prussian town, XIX. 6. REMO (San), Italian scaport, XIX. 6. Remond (M. Dubols), on the electrical currents of the human body, VIII. 571 on voltaic electricity, XXI. 638. See

Reymond

# REM—REP

Remonstrant Synod of Ulster, XII 532 REMONSTRANTS, XIX 6; III 617; XI 573, XVIII 478—their views of original sin, XXI 204

Remontoire escapements, VII. 11, 19, 21; XVII. 386

Remora, family of fishes, XII 270-Pliny's account of, 1b -in India, XI. 457-used for catching tuitle, ib

Remorse, I. 384. REMPHAN, XIX. 6. REMUS, XIX. 6; 296.

REMUSAT (J. P. Abel), XIX. 6-on the Chinese alphabet, II. 609

REMY (St), French town, XIX. 7 RENAIX, town in Belgium, XIX 7. Renal calculi, among cattle, XXI 570. Renaldini's thermometer, IV 457.

Renan (M), on the Egyptian language, XI 412 RENAUDOT (Eusèbe), orientalist, XIX. 7-

on the Greek alphabet, IL 612 - (Theophraste), his Gazette, XVI.

195, 196 RENDEL (James Meadows), engineer, XIX.

7-on the construction of breakwaters, XI 221.

Rendle (Mt), of Plymouth, his mode of heating hot-houses, X1 724.

RENDSBULG, town in Denmark, XIX 7. Renfi of Anjou, XIX. 8, XIII 694; XX 259, 263.

(Marc), Marquis de Montalembert, his work on fortification, IX, 835,

Renevier (M), on the lower greensand, XV 210, n

RENERLW, Scotch town, XIX. 8.

RENEERWSHIEE, XIV. 8—separated from Lanarkshire, XIII. 174—agricultural statistics, XIX. 796, 797, 798—population, 799.

Rini, Turkish town, XIX. 9.

Runnell (James), XIX. 9-on the Peri-plus of Hanno, II 209; X. 461-on the ruins of Babylon, IV. 341-on the geography of India, X 473-on the conquest of India by the Mahonmedans, XI. 478-on the climate of the Chauts, X. 599-on the site of Troy, AXI 356,

RENNES, town in France, XIX, 10-population, X 277. Remet, VII. 624; XV. 10.

Rennie (George), on the friction of water, XII. 76-his experiments in hydraulies. 153 - on the transverse strength of stones, AX. 717, 718.

- (James), his works on insects, IX. 17. (Jons), XIX. 10 -on the Plymouth breakwater, Al. 222; V. 307 - Southwark Bridge designed by, 361; XIL 583-his iron bridges, ib.-on canals, NVI, 53-his plan of Waterloo Bridge, V. 363-his diving-bells at Howth and

Plymouth, VIII. 65, 66. Renould (A. G.), on the printing of Aldus, IV. 710.

Reuschild, Swedish general, XX, 854.

REST, XIX. 13—nature, origin, and progress of, XVIII. 243—does not enter into price, 247—influence of situation on, 1b.—of land in England, VIII. 724 -of farms, H. 263, 264- taxes on, NX. 48-would not be affected by a fax on profits, except in the case of the farmer,

RENTON, village in Dumbartonshire, XIX. 13.

RESWICK (James), martyr, XIX. 13; XVIII. 501.

Renzi (Dr Salvatore de), on the rate of mortality in Naples, XV. 624.

Rephan, XIX. 6.

REPP (T. Gudmundsson), XIX. IS. Representative government, X. 785. REPRIEVE, XIX. 13.

Reproduction, organs of, in man, III. 68; in brutes, 113; in plants, V. 112-physlology of, 148, 132-in the crustacea,

### REP-RES

VII. 539—reproduction of lost or mutilated organs in animals, III. 176, 375; XIX. 29, 82—function of, XVII. 656, 668—diseases of, 702—in zoophytes, XXI. 973 et seq., 1002. See Generation Reprilla, or Reptiles, XIX. 13; II. 772—their bones, III. 74, 86—muscles, 91—organs of smell, 94—eyes, 95 et seq—ears, 99—tongue, 100—vocal organs, 102—nervous system, 103—bran, 104—teeth, 105, XVI. 428 et seq—stomach, III. 109—intestines, 110—heart, 112—lungs, 113—secretory organs, 10—hyber-actics, 112—121—121, 21, 21 cled et plugles.

III. 109—intestines, 110—heart, 112—lungs, 113—secretory organs, 15—bybernation of, 181; XII 62—blood globules of, II 779—kinds used as food, IX. 763—figures of, borne on arms, XI 338—figures of, borne on arms, XI 338—fication, XVI 477—order of their appearance in the strata of the earth, XVII 92—fossil, 132 tt seq—geological distribution of, 154—foot-prints of, 129, 130—distribution of, 634—number known, 631—period of the greatest development of reptile life, 640—mode of fecundation, 683—of Africa, II 218—America, 714—Ceylon, VI 394—India,

XX. 804. See Serpents, Tortoises, Lizards, Crocodiles, &c REPTON (Humphry), landscape-gardener, XIX. 87.

XI. 456-Madeira, XIII 800-Sumatra

— in Derbyshire, VII. 753.

REPUBLIC, XIX 87—Plato on a, XVII
809—republics in Europe, IX. 387—
Swiss, XX. 885 See Democracy,
Athens, United States, &c.

Repulsion, IV 219—electrical, VIII 536, 554—law of, 549—alternate attraction and repulsion in some bodies, XX. 752, 753—the cause of some bodies swimming in liquid fitude specifically lighter than themselves, 753.

REQUENA, town in Spain, XIX. 87. Requeno (Vincenzo), on the ancient lyre, XIII. 752.

Requesens, XI. 568. Requiema, fossil mollusks, XVII. 107. Requista, village in France, XIX. 87.

Resch Glutha, XII 776 Reschid Pasha, XXI 376 Resedaceæ, nat order of plants, V. 182. Resende (Garcia de), X 623, n. 1

Resende (Garcia de), X 623, n. 1 Resenius (Prof.), his edition of the Edda, VIII. 388.

Reservoirs, water passing from one to another, XII. 128—altitude of, 120 RESIL, or Reshd, Persian town, XIX. 87. Residence, limits of insurance policy as to, XII. 410.

RESIN, XIX. 87—in chemistry, VI. 517—in mineralogy, XV. 123—electricity developed during the melting and cooling of, VIII. 556—specific gravity of, XII. 89—quantity imported, VIII. 735—how distinguished from gum, XI. 93—resingas, X. 428—used as the bases of varnish. XXI. 526

RESINA, Neapolitan town, XIX. 88. Resinous electricity, VIII. 535, 537—discovery of, 525.

Resist-pastes, in calico-printing, VIII. 317
RESISTANCE OF FLUIDS, XIX. 88; 192 et
seq.; XII. 159; I. 886—to the motion of
a vessel, XX. 158, 662—law of, 663

of the air, XL 106 et seq; XVIII 67—to the vibrations of a pendulum, XVII. 381. See Projectales.

XVII. 381. See Projectales.

of materials, V. 348—of stones,
XX. 713, 715, 717—of walls, 720 See
Strength of Materials.

in mechanics, XIV. 380, 381—rolling resistance, 408.

Resolution of forces, VIII. 334
—————————in music, XV. 722.

Respect, duty of, XV. 866
Respiration, XVII. 662; III. 170; XVIII.
72—quality of the air changed by, 73
—mechanism of, ib.—essential to mammiferous animals from births, II. 726—different modes of, in vertebrated animals, 772, 778—of plants, V 104—of arachnides, III. 369—bees, IV. 578—insects, IX. 47—fishes, XII. 225—whales.

#### RES-REV

XIV 237—reptiles, XIX. 14, the batrachians, 74; serpents, 48—length of time during which the breath can be held in, VIII 55—mode of restoring it, in drowned persons, 182—respiratory food, VI. 522. See Amphibia, Diving. Respiration (organs of), in man, III. 66—

in the lower animals, 112—diseases of, XXI 571—in the crustacea, VII 539—in birds, XVI 734—in the echinodermata, XXI 983. See Lungs, Phthisis.

Ressons on gurnery, XI 108 Restadt, peace of, IX. 370. Restell's lock, XIII. 539.

Restraceæ, nat order of plants, V 215. Restri de la Bretonne, character of his novels, XIX. 289

Restform bodies of the brain, III 55
Restforation of Charles II, V 420—literature of that period, XV. 29—newspapers, XVI 182

Resurrection, analogy between it and the metamorphosis of insects, IX. 54—of Jesus Christ, XII. 560

Retail dealers, advantage of, XVIII 237. Retaliation, Arabian law of, III 352—regarded by Socrates as a duty, XX. 397. Retarded motions, VIII 344.

Retarded motions, VIII 344. Retarding forces, VIII 347 Rete mucosum of the skin, IL 834; VII.

Retention, a universal law of mind, XIX.
111

Retford (Dr), on Roman Catholic missionaries, XV. 277.

(EAST), town in Nottinghamshure, XIX. 89

RETHIL, town in France, XIX 89.
RETICLE micrometers, XIX 89; XIV. 758.
RETICULATION, XIX. 89. See Lace.
RETIMO, or Retiumo, in Ciete, XIX. 94.

Reina of the eye, III. 44, XIII 461; XVIII 678—occasional insensibility of, in oblique vision, XVI. 665—whether the seat of vision, 695—duration of impressions on, ib.—in various animals, III 97

Retinasphalt, XV 124 Retinite, mineral, XV. 124. Retort, gus retorts, X. 411—steam-boiler,

XX. 615. Retreat, The, lunatic asylum, XIV. 528. Retreats in war, XXI. 718.

Retriever-dogs, XX 220. Retting of flax, II. 332, IX. 655; XIII. 494—Schenck and Watt's process, II

494—Schenck and Watt's process, II 332 RETZ (Cardinal de), XIX 94

RETZ (Cardinal de), XIX 94 Retzia, fossil mollusks, XVII. 104. Retzius (Prof.), on the teeth, XVI. 407, 409.

REUGHLIN (Johann), XIX. 95; XVII. 523
—his method of pronouncing Greek,

REUS, town in Spain, XIX. 96.
REUSS, in Germany, XIX. 96.
(M.), on the capillaries, II. 799
Reussin, mineral, XV. 99.

REUTLINGEN, in Wurtemberg, XIX. 97. Revalenta Arabica, an empirical preparation, XIII. 333.

REVEL, Russian seaport, XIX. 97; IX. 339—Lutheran church at, 529.

town in France, XIX. 97.

REVELATION, XIX. 100—proof that there must originally have been some revelation to man, I. 450, 452—disbelhof in, from there being no infallible interpreter, 500—revealed law, XIII. 253. See Theology, Scriphure.

Book of, XIX. 98; III. 297.

Reveley (Mr), his description of the jarrah tree, XXI. 278.

Revenge, law of, for blood, among the Arabs, III 352—a frequent cause of cannibalism among the Fijians, XVIII.

Revenue, of Attica, IV. 217—of the United Kingdom, VIII 751—items from which it arises, XXI. 75—of Ireland, XII. 525—of the United States, XXI. 428. See Funding System, Political Economy, Taxation, and the different Kingdoms.

# REV-RHE

Reverberatory furnace, X. 356.

Reverence due to the Deity, XV 571;

XXI 195 See Devotion, Veneration.

REVEREND, XIX. 100

— of series, in algebra, II. 532. Revêtement, in fortification, XI. 819 Revett's Antiquities of Athens, III 456. REVIEW, XIX. 100 See Edinburgh Review, Ouarterly Review

Revival of learning in Europe, I. 14, VII 535, XIII. 387, 388—naturally produced the Reformation, I 15—its effects on the advancement of physical, metaphysical, moral, and political science, 16-20. See Learning.

REVOLUTION, in England, of 1688, XIX 100, V 439; VI.667, XI 578—in Greece, 22—in Chile and La Plata, II. 701

— (French, of 1790), V 585, X 45—retrospective view of the, 121—its effects on agriculture, 245—on religious institutions, 267—organisation of the police at the outbreak of, XVIII. 187.

REVOLVER, pistol, XIX. 100—Col Colt's, XI. 102—Deane and Adam's, ib. Revolving magnetism, XXI 638. REWA CAUNTA, in India, XIX 100.

REWAII, Indian state, XIX. 100
Rewards (future), described in the popular mythology of the Greeks and Romans, I. 459—temporal, under the Mosaic dispensation, 470, 471, 478, 478—not one of the sanctaons of the Mosaic law, 479; but one of the sanctaons of the New Testament dispensation, 481.

Reymond (D Du Bois), on anunal electricity, I 961 See Remond

Reynaud (Jean), on the form of continents, XVII. 571

REYNOLDS (Sir Joshua), XIX. 101; XVII. 56, 78, 82, 83, 54—his character as a painter, III. 714, XVII. 74—on the imitation of nature in painting, III. 716—on Raphael's style, 708—his theory of beauty, IV. 539—his friendship with Burke, V. 775, Goldsmith, X. 706—his thoute to Vanbrugh, XXI. 519—on Gamsborough, X. 367.

(William), on the strength of gun metal, V. 358, 360—on non coment, 361.

Rezat, in Bavaria, IV. 516. RILBDOLOGY, XIX 102, XV. 777 RHADAMANTHUS, XIX 102, VII. 493. RHÆTIA, XIX. 102.

Rhestian Alps, II. 624; X. 582; XX. 888 Rhesticus (G. J.), X. 505; II. 547; XIX. 104.

Rhato-Romanic language, IX. 391. Rhaguun, genus of insects, IX. 146 Rhamnaces, nat order of plants, V. 183. Rhamnus, town of Greece, XIX. 103. Rhamphichthys, genus of fishes, XII. 234, 233.

Rhamphognathus, genus of fossil fishes XII. 346

Rhamphomyia, genus of insects, IX. 236 Rhamphosus, genus of fossil fishes, XII.

Rhampus, genus of insect, IX. 140. Rhamses the Great, Scythian campaign of, XVII. 264.

Rhaphium, genus of insects, IX. 242
RHAPSODIST, XIX. 108
Rhateny order of plants, V. 183

Rhatany order of plants, V. 183.
RHAZES, Arabian physician, XIX. 103—his medical writings, XIV. 456—his skill in surgery, XX. 815.

Rhea, Egyptian deity, XI. 382 and n. 9.
——genus of birds, XVI. 796
RHEGUM, XIX. 103; XVIII. 830—coins

of, XVI. 363. Rheidol, in Wales, VI. 223. RHEIMS, town in France, XIX 108—population, X. 277.

Rheingau, XV. 801; XIX. 144—wines of, XXI. 885

Rheitas' cye-piece for telescopes, XXI.
124.

RHENANUS (Beatus), XIX. 104.

# RHE-RHO

RHENUS. XIX. 104. See Rhme.
Rheostats, Wheatstone's, I 984; XXI.
625—for considerable resistance, ib.—
for feeble resistance, ib

RHETICUS, XIX. 104 See Rhæticus.
RHETORIC, XIX. 104—Aristotle on, I. 54;
III 556—characters of abbieviation in,
VI 419—among the Druds, VIII 189
—reprobated by Plato, XVII. 802—
artacle on, in this work, by Professor
Spalding, XX. 496

RHEUMATISM, XIX 142—in veterinary science, XXI 557

Rum, Bas, and Haut, departments of France, XIX 143

RINNE, river, XIX 144; IX 381, X. 582; XI 581; XVII. 647; XVIII. 662; XIX 181, XX. 888—navigation of, IX 385—delta of, XVII 586—velocity of its current, XII. 144, 145—quantity of matter suspended in the current of, XV. 86 and n 1.

——— PROVINCE OF, XIX. 145, IV. 518
——rocks of, XV. 199, 202
———— Confederation of the, X 142

Rhineland, agriculture of, XVIII 666. Rhinelepis, genus of fishes, XII 268. Rhinella, genus of rephiles, XIX 81. Rhinella, genus of fossil fishes, XII. 338. Rhingia, genus of insects, IX. 240 Rhinelthys, genus of fishes, XII 258 Rhinelatide, family of fishes, XII 327

Rhmodatus, genus of fishes, XII 327
Rhmoderos, XIX 145, XIV 198, 204—in
Abyssima, II 55—Africa, 217—Assam,
III. 764—Java, XII 702—Sumatia,
XX. 804—dentition of, XVI. 471—fossil,
XVII 156

Rhmodon, genus of fishes, XII 324 Ithmodontidæ, family of fishes, XII 324 Rhinolophus, genus of mammalia, XIV. 149.

Rhinopoma, genus of mammalia, XIV.

Rhmoptera, genus of fishes, XII 328. Rhinosimus, genus of insects, IX. 138. Rhmota, genus of insects, IX. 138. Rhmotragus, genus of insects, IX 145. Rino, seaport in the Malay peninsula, XIX 145.

Rhiphidia, genus of insects, IX. 227. Rhiphera, genus of insects, IX. 107. Rhisostrogus, genus of insects, IX. 125. Rhizobolaceæ, nat order of plants, V. 186. Rhizocarpeæ, nat. order of ferns, V. 144, 216.

Rhizodus, genus of fossil fishes, XVII. 123, 124.

Rhizome, in botany, V. 79, 143. Rhizophoraceæ, nat order of plants, V. 191. Rhizophyza, zoophytes, XXI. 999. Rhizopoda, class of fossils, XVII 93—of zoophytes, XXI. 1006.

zoophytes, XXI. 1006. RHODE ISLAND, XIX. 146; XXI. 419, 433 —debt of, 428—wines of, 888 RHODES, XIX. 147—Colossus of, VI 422;

RHODES, XIX. 147—Colossus of, VI 422; VII. 151, 350; probably served as a lighthouse, XIII. 463—sculptors natives of, XIX 558—coins of, XVI. 377.

(Alexander de), his account of tea,
XXI. 88.

Rhoders, groups of fossil fisher, XII. 247

Rhodeus, genus of fossil fishes, XII 347. Rhodium, VI 499—specific gravity of, XII. 88—oil of, used in destroying vermin, XXI. 548

Rhodius (Joannes), his Life of Celsus, XX. 812, n. 1.

Rhodizate, mineral, XV 94. Rhodochrome, mineral, XV. 80. Rhododendron, XI. 748—in Ceylon, VL 394.

— mountain, XXI. 376.

Rhodospermex, sub-order of algre, V. 218.

Rhocus, ancient sculptor, XIX. 853.

Rhomb Spar, XV. 92.

Rhombic system, in crystallography, XV. 47—twin crystals in, 52.

# RHO-RIC

RHOMBOID, XIX. 147; X. 508-crystallisation, VII 551, n 4

Rhombus, XIX. 147, X. 508. genus of fishes, XII. 272-fossil, 345; XVII. 128

RHONE, French department, XIX 149 river, XIX 149; XVII 647, XX.
888—blue colour of, XVII 574—floods,
600—slope and velocity, 601—Perte du,
XX. 887—course of, through Valais, XXL 504

RHUBARB, XIX. 150; V 204—culture of, XI 744—quantity imported, VIII. 735. RHUDDLAN, Welsh town, XIX. 150

- Marsh, trigonometrical base on

XXI 331, 334.
RHUMB and Rhumbline, XIX. 150, X.

Rhyddlaw, XIX 150. RHYME, XIX. 150

Rhymer (Thomas the). See Thomas of Erceldoune

Rhynchæa, genus of birds, XVI 803. Rhynchænus, genus of insects, IX 140 Rhynchaspis, genus of birds, XVI 817. Rhynchichthys, genus of fishes, XII 279. Rhynchites, genus of insects, IX. 138 Rhynchobates, genus of fishes, XII. 327 Rhynchobdella, genus of fishes, XII. 292. Rhyncholites, fossil mollusks, XVII. 111,

Rhynchonella, genus of mollusks, XV 338 Rhynchonellidæ, family of mollusks, XV. Rhynchophora, family of insects, IX 137.

Rhynchops, genus of birds, XVI 817 Rhynchosaurus, fossil reptiles, XVII 141 Rhynchostoma, tribe of insects, IX. 133 Rhyphus, genus of insects, IX 230 Rhypticus, genus of fishes, XII 276. Rhytim, XIX. 150, 254—musical, XV 717 Rhytimometer, XIX. 150. Rhyzophagus, genus of insects, IX 142 RIAZAN, in Russia, XIX 151, 521 Ribadeneira (Pietro), his history of Loyola,

XII, 750. RIBALTA (Francisco), painter, XIX 151.

(JUAN), painter, XIX 151.

Ribble, English river, XIII. 177, XVIII

510; XXI. 957—improvement of its

navigation, XVI 77. Ribbon apodals, sub-order of fishes, XII.

229 Ribbon-fish, XII. 303.

Ribbon-jasper, XV 69. Ribbon-saws, XIX 678. RIBEAUVILLE, town in France, XIX. 151. Ribeirg, in the Azores, IV. 336.

RIBERA (José de), painter, XIX. 152. Ribgrass order of plants, V. 203-spike of

ribgrass, 115. Ribs of man, III 9, 10,—of the mammalia, 76—birds, 85—reptiles, 87—fishes, 89. RICARDO (David), XIX. 152; V. 636—on the high price of gold before the re-coinage, VII. 79-on the wages of labour,

143, 144-on the corn-laws, 368 et seqon the cottage system, 435—on bullion, IX. 437—his article on the Funding System in this work, X 328, n—on the currency, XV. 429-on political economy, XVIII. 249-his theory of profits, 252 -Malthus' examination of his doctrines XIV. 117-on taxation, XXI. 46 et seq

on tithes, 63 RICAUT (Sir Paul), XIX. 156

Riccate on fluxions, IX. 738. Ricci (Sebastiano), painter, XIX. 156; XVII. 72.

Ricciacese, sub-order of hipaticse, V. 217. RICCIARELLI (Daniele), painter, XIX. 156. RICCIOLI (G. Battista), XIX. 156—liis as-tronomical labours and opinions, I. 611; III. 801-his catalogue of stars, IV. 80.

Riccoboni on love-intrigue in the French drama, VIII. 154. RICE, XIX. 156; XVII. 630—as food, IX.

-analysis of, ib -quantity imported, VIII. 735—in Ceylon, VI. 399; China, 588; Bengal, IV. 649; Italy, XII. 639; India, XI. 453; Lombardy, XIII. 655; Madagascar, 792; Nepaul, XVI. 142; United States, XXI. 425.

# RIC-RID

RICH (Claudius James), XIX 157-his account of the ruins of Babylon, IV 342 et seq , XVI 273—his collection of oriental MSS., XIII 392

- father and son, managers of Drury Lane Theatre, XXI. 173.

and Poor, their duties to each other, XV 569.

RICHARD L, king of England, XIX. 157reign of, VIII. 674-character of, 1bdeath, 675—his expedition to the Holy Land, 481, 482; VII 525, 529—his pationage of minstrels, XV. 252—treat ment of the Jows, XII. 779; VIII 675-his fleet, XX, 120-his encourage ment to the University of Oxford, XXI 453-tournaments in the time of, 318

II, XIX. 157—reign of, VIII 684 —his visits to Dublin, 217—his house-hold magnificence, XI. 773—his Irish policy, XII 472—his fleet, XX 121

- III, XIX. 157—reign of, VIII 693 -his encouragement of players, XXI 165

DE BURY, XIX 157 OF CIRENCESTER, XIX 158

on the roots of plants, V 76, 77 RICHARDSON (Jonathan), portrait-painter, XIX 158

(II. D.), his work on the honey-bee, TX 94

- (James), his expedition to Central Africa, II 211, X. 478

(M1), of Hull, notice of his works on brewing, V 319

on Milton XV 34

on political economy, XVIII. 219. (SAMUEL), novelist, XIX. 158—his dislike of Fielding, IX. 540 and n 2merits of his novels. XIX. 271.

- (Sir John), on the aurora borealis, IV 247, 249-on the Wolverine, XIV. 156-on the skunk weasel, 158on the American field-mouse, 182-on the jir-falcon, XVI 745-on the Loucheux Indians, XIII. 220-his northern

explorations, XVIII 172.

RICHELLU (A. J Duplessis), cardinal, XIX 159—his treatment of Corneille, VIII 149—compared with Mazarin, XIV. 374-minister to Louis XIII., 34-

plot for assassinating, XIX. 94. Richer on the figure of the earth, IX. 548. Riches See Wealth.

Richlieu (Duke of), X. 174—his cabinct, 175—retirement of, 179—second minis-try of, 181—resignation in 1821, 183.

Richman (Prof ), his death while making electrical observations, VIII. 528-on the Leyden jar, 612

RIGIMOND, town in Yorkshire, XIX. 165—castle, XXI 057.

in Surrey, XIX. 166; XX. 836, 837 in Virginia, XIX. 166, XXI. 597, 598. 599.

RICHTER (J. Paul Friedrich), XIX, 166-his novels, 291.

- on chemical combination, I. 937. Ricimer, XIX. 363.

Ricinus, genus of insects, IX. 262. Rickards on the Hindus, XI. 471 et seq.

on British exports to India, 461-on the Maliks of India, 512.

RICKMAN (Thomas), architect, XIX. 168on pointed architecture, III. 480 et seq. (John), his notice of Telford, XXI. 145-Life of Telford edited by, 146.

RICKMANSWORTH, In Hertford, XIX. 169. Ricochet battery, IV. 511. Riddarholms Church, in Stockholm, figures

and relics in, XX. 705. Riddell (Prof.), his binocular microscope,

XIV 784. on the delta of the Mississippi,

XV. 279. Riddle, or ænigma, II. 162. Rideau Canal, VI. 134.

Ridges, in ploughing, best method of forming, II. 286.

Ridgway (Messrs), of Horwich, their improvements in bleaching, IV. 759.
Ridicule, largely employed in the Greek comedy, VIII 139—a sense of the ridi-

# RID-RIO

culous as an incentive to virtue, XV 564

Riding, XI 672-as an exercise, 170 See Horsemanship

Ridinger, engraver, VIII 809. Ridley (Henry), on the anatomy of the brain, II. 764

(Nicholas), bishop, XIX. 169; XIII. 247.

RIDOLFI (Carlo), XIX. 169 RIENZI (Nicolo Gabrini de), tribune, XIX. 169, 366, 367; XII 649, XVII. 497.

RIESLIGEBIRGE, XIX. 171 Riesi, village in Sicily, XIX 171

Riess (P.), and Moser, on magnetism, XIV 13-on solar magnetism, 596

RIETI, town in the Papal States, XIX. 171
—delegation of, XVII 243
Rieves and Cox (Messrs), their telescopes, XXI 119

Riffault (M), on voltaic currents, XXI. 628

RIFLE, XIX. 171—principle of, XI 127—American, 101—Minić, ib—Enfield, ib. -ufic-shooting, XX. 211.

Rifle-bird, XVI 772. Riflemen, III 686

RIGA, XIX. 171, 531-Intheran climch at, 529-taken by Gustavus Adolphus, XX. 818.

or red pine timber, XXL 275 RIGAUD (Hyacinthe), painter, XIX 172

- (Prof), on Ptolemy's Optics, XVI 521-on the use of telescopes in England, 528

Rigdon (Sidney), Mormon, XV 589 Rigel, star, IV. 79.

RIGGING of a ship, XIX. 172-tension of, XX. 180-chain and wire-tope 11gging,

Right Ascension, IV 3 - PETITION OF, XIX 172; V. 392, XX. 37.

- TITLE, XIX. 172.

Right and wrong See Ethical Philosophy, Moral Philosophy, Conscience.

in law, XIII. 255 RIGHTS, XIX 172; XIII. 274—of nations, in time of peace, 282, in time of war, 285-offences of the press with regard to private, 360-means of preventing the violation of, by the press, 262—the Economists on, VIII. 376—municipal nights, 781.

- of Man, French declaration of, X. 54, 62-Society of, 208-Paine on, V. 543; XVII. 45.

- BILL OF, XIX. 173 Rigidity of timber, AX. 172. Rime, hoar-frost, VII. 765—frost-rime, XI.

Timella, fossil mollusks, XVII. 109. RIMINI, XIX. 173; XVII. 241. Rimula, fossil mollusks, XVII 111. RINGON (Antonio), painter, XIX. 173; XVII. 75.

Ring-ouzel, XVI. 751, Ringbone, XXI. 558, Ringdove, XVI 793. Ringent corella or Calyx, V. 124. Ringicula, fossil molluska, XVII. III.

Rings, in opties, produced by crystals, XVI. 651, 652 RINGWOOD, in Hampshire, XIX. 173. RINGWORM, XIX. 173; XVII. 697. Rimmeini (Archbishop), XII. 483.

Riobamba, town in Ecuador, VIII 388. Rio DE Janeiro, XIX. 174; V. 281, 295—climate of, II. 678; V. 293—population, 295-vegetable productions, 293-European emigrants in, 295-sciences taught in, 297-commerce, 209-attack of the French on, 282—settlement of, 280, 281—library at, XIII. 431.

Grande, rivor, XIX. 175.

del Norte, Mexican river, XIV.
715, 729; XVII. 604.

DO Nonte, province of Brazil, XIX. 176; V. 295.

no Sul, province of Brazil, XIX. Negro, XVI. 130. See Negro (Itio). RIO-ROA

Rюда, in La Plata, XIX 176 , XVII. 779. Riolan, physician, XIV 460 RIOM, town in France, XIX. 176 RIONERO, town of Naples, XIX. 176. Riots, discussion, in 1780, on the mode of quelling, V 493

Riouw, in East Indies, XIX 145 Ripidolite, mineral, XV 78 Ripiphorus, genus of insects, IX 133 RIPLEY, town in Yorkshire, XIX 177 RIPON, town in Yorkshue, XIX 177; XXI 959.

RIPPERDA (J William), baron of, XIX 177. Ripple-marks on 10cks, XV. 159. Ripping of flax, XIII 494.

Rishis, ancient lectures on medicine, XIV 450, 457

Risings, castle, VIII. 682 Risso (M), on birds, XVI 731. Ristigouche, river, XVI 163. Rita, genus of fishes, XII 262. Ritchle (Dr W), on electricity, VIII 540
—his photometer, XIII 455; XVII 555-his tersion galvanometer, XXI. 642

Ritschl on Plantus, XVIII 2, 3 Rrison (Joseph), XIX. 177—on the minstrels, 257-his attack on Warton's History of English Poetry, XXI 735.

RITTENHOUSE (David), astronomer, XIX

Ritter (J D), his edition of the Theodo-sian Code, VI 711 ———— (J W.), on the prismatic spectrum, I. 921, XIII 452-on the influence of magnetism on chemical action, AIV. 41-on the sun's rays, XVI. 556-on the effects of galvanism upon the eye, XXI. 634.

on Hindu philosophy, XVII. 230, 231, notes.

Rittingerite, mineral, XV. 112 Ritual, Egyptian funeral, VIII. 411. Riva, town in the Tytol, XIX. 178 Rivarol on the causes of the French Re-

volution, X 48 Rive (de la). See Delarive.

RIVE-DE-GIER, town in France, XIX. 178 RIVER, XIX 179; X. 483; XVII 600 -courses and slopes of, 601; XVI, 78 -theory of rivers, I. 886-motion of, XII. theory of rivers, 1, 886—moron or, 844, 70, 71—flow of water in, 141- physical characteristics of, AVI 57, 87—com-partments of, 57—tidal compartments, 63—velocity of their currents, 78—math-duction of 87 ters suspended in, 86- discharge of, 87 —velocity and inclination of, X11, 145; XVII, 601—embankments of, VIII, 633—straightening the course of, lb,—rights of different nations respecting, XIII. of unicidat matons respecting, All 1985—action of, on rocks, XV. 140 - deposits at the mouths of, fb., 141, 217; XVI. 86; XVII. 866-lengths of, éc., 646—with subterranean courses, 601—great number and magnitude of navigable rivers in America, II. 675-none of the first-class flow westward, 676 — African rivers, 213, 214; XVII, 607— Asiatic, III, 733; XVII, 606—dredging of, XVI. 68-European rivers, 1x. 381, XVII. 605. See Delta, Navigation (In-

land), and the geographical articles. River-mists, XIV, 654. River-walls, XVI, 71. River-weed order of plants, V. 207. Rivers (Mr), on the culture of pears, XI. 714—his orchard houses, 724. Rivetiling of iron plates, XX, 176, 195 -

rivetting machine, 177. Riviera, XIX. 633, 634. Rivora, Italian city, XIX. 223—battle of,

X. 101; XV. 790. Rixdollar, XV. 448, 444, 445. Rizi (Francisco), Spanish painter, XIX.

223. Rizzi (Schastiano). See Riccl. Rizzio, or Riccio, murder of, XIX. 784. Rjazan, in Russia, XIX. 151

RJEV, Russian town, XIX. 220. Roach, XII. 256—angling for, III. 161

HOAD, in navigation, XIX. 233; X. 483, ROAD-MARKNO, XIX. 228—roads in China, IL 688—Pern, 685, 688—England, VIII.

#### ROA-ROB

722-France, X. 244-Palestine, XVII. 191 and n .- Russia, XIX. 486-Scotland, -Ireland, XII 528- Isle of Man, XIV. 245-bridges now used for raising the level of. IIL 339-of the sixteenth contury, VII 188—embankments to serve as, VIII 646—road over the Smplon, II. 624, n., XIX. 228, XX. 298-Roman military, XIX. 308-of the Two Sicilies, XX. 250-of Spain, 491-Sweden, 864-United States, XXI 427-in landscape gardening, XVII. 773-repair of roads by contributions of labour, XXI 43-steam-carriages on, I 884carriage roadway, III. 493. See High-

ROANNE, town in France, XIX. 229. Roard (M), on the varnish of silk, IV. 769, 770.

Roaring, a disease of the domestic animals, XXI, 571.

Roasting, IX. 765-loss sustained by animal food by, 766.

Robbery, honomable in Arabia, III. 349 a profession in India, XL 520; XXI -of mail-coaches, XVIII. 407.

Robbia (Luca della), his porcelam, XVIII 432, 433-his sculpture, XIX, 860 Robell (M), his process of galvanography,

XXI 636.

Robert de Belesme, VIII 669.

the Devil, VIII 664.

(Eugene), his work on the silk-

worm, IX. 23

of Gloucester, XIX. 229 — his rhyming description of Ireland, VIII

king of France, XIX 229, X.

I, king of Scotland. See Bruce II and III, kings of Scotland, XIX. 229, 757

- (LEOPOLD), XIX 229

Robert's analysis of pale Indian and Scotch ales, V. 834. Roberts (Captain Julius), his mortar, XI

· (Lewis), on the trade of Manches-

ter in 1641, VIL 440 Robertson (Mr), on the mortality of chil-

dren, XV. 614.

(Mr), on the excavations of the

Pholas dactylas, XV. 354.

(Dr William), XIX 229—on the balance of power, IV 390—on the beneficial effects of the Crusades, VII. 527-on Indian chronology, XII. 789sum paid for his History of Charles V -Gilbert Stuart's enmity to, XXI. 783

Robertson's patent robes, XIX. 410. Roberval, IX. 671—originality and mathematical genius of, I. 555—claimed the discovery of the area of the cycloid, ib. -improved the method of quadratures.

ib.-his disputes with Descartes, VI 279. ROBERVALLIAN LINES, XIX. 233.

Robes, mistress of the, XL 776. ROBESPIERRE (F -M -J -Isidore de), XIX. 233; X. 69 et seq.—his power, 89 downfall and execution, 91, 92 - denounced by Tallien, XXI. 14. Danton.

Robin Hood, XV, 599.

Robineau-Desvoidy, his works on insects,

Robinet, on the formation of dendrites, VII. 550.

Robinia viscosa and pseud-acacia, XVIL 762, 759.

ROBINS (Benjamin), XIX. 235-sketch of his life, writings, and contributions to mathematics, I 717, n. 1—his essay on Prime and Ultimate Ratio, 718, n 1-his method of determining the impulse of balls, 726—on Liebnutz's law of continuity, 133, n. 1—his defence of the Newtonian calculus, IX. 676-on gunnery, XI 103, 107 et seq.—his experi-ments on the resistance of the air, XVIII 114; XX. 4, 11-on Enler's overweening confidence in analysis, 771.

# ROB-ROC

ROBINS or Robyns (John), astronomer, XIX 235

- filter, IX, 582.

Robinson (Dr), on the site of Capernaum, VI 206-on Idumea, XII 158, 159on the topography of Jerusalem, 735 et seq -his estimate of the population of Jerusalem, 747—on the passage of the Israelites through the Red Sea, XVIII

(Dr), of Armagh, his experiments in voltaic electricity, XXI. 627.

(John), Independent, XII 368 (Prof.), on gunnery, XI 119, 129, 131 et seq

(ROBERT), Baptist minister, XIX.

236. ROBISON (Prof John), XIX. 237, L 871as a practical philosopher, 870—as an expositor of science, 871—his friendship with Watt, ib .- his adventures, ib -- his appointment to the University of Edinburgh, ib -his articles in this work, 1b -his mechanical philosophy, 872-on electricity and magnetism, ib. - his knowledge of mathematics, ib-as a lecturer, 873—his philosophical character, ib.—his steam-carriage, 881—anticipation of Volta's pile by, 963-on the arch, III. 415—on the construction of bridges, V. 358, 360, 361—his article in this work on Carpentry, VI. 249-on the electric shock, VIII. 602-on magnetism, XIV. 5, 14, 22, 24, 25—on theories of harmony, XV. 702—on musical intervals, 705—on the strength of ropes, XIX. 402-his article River, in this work, 179, n.—his theory of roof, 374—his article Scamanship, in this work, XX 18—on steam, 554, 557.

Robley (Mr), his culture of the breadfrut, V. 301.

ROBSON (George Fennel), painter, XIX.

Rocambole, plant, XI 741. Roccamonfina, XX. 236.

Rocella, lichen. See Archil.

ROCHDALE, in Lancaster, XIX. 240failure of the saving's bank at, 664. Roche (de la). See Delaroche

Abbey building stone, XX. 712. ROCHEFORT-SUR-MER, town in France, XIX 241-pillage at the dockyard of, X 227 -British expedition against, V. 463

ROCHEFOUCAULD (François), Duke de la, XIX. 241-influence of his writings, I 54, 55, 56 - Johnson's and Voltaire's opinions of, 54, 55—manner in which he polished his writings, 54-tendency of his maxims unfavourable to morality, 1b .- excellent private character of, 55 -narrow sphere in which he studied mankind, ib -reasons why his name should be united with Montaigne's, ib

ROCHELLE (La), town in France, XIX. 241—salt, VI. 515—surrender of, in 1628, XIX. 164.

ROCHESTER, in Kent, XIX. 241—population XIII. 67—foundation of the piers of the new bridge at, XX. 723.

town in New York, XIX. 242.

Rochon (Abbé), his micrometers, XIV. 750, 751, 752.

Rock-alum, II. 637.

Rock-cork, XV. 81-leather, ib.-wood, ib. Rock-crystal, XV. 69—circular polarisation in, XVI. 676-mines of XV. 246-refraction of XVI. 659-dichroism in, 666 -abundant in Lapland, XIII. 234-as a plate for the knufe-edge of pendulums, XVIL 388

Rock-elm, XXI. 276 Rock-goat, XIV. 211. Rock-oil, XVI. 493.

Rock-rose order of plants, V. 188. Rock-salt, XV. 96, 145, 148; XVII 623its wonderful transparency for heat, L 955. See Salt and Salt Mines.

Rock-sheep, XIV. 213. Rock-soap, XV 83.

Rock-work, in gardening, XI. 747. ROCKET, XIX. 242; XI. 142, XVIII. 707;

# ROC-ROG

III 698--their use in cases of shipwieck,

XIII. 441, 445.
Rocking-stones, VIII 187, XV. 166—in
Devonshire, VII 764. See Logan-stones. Rockingham (Marquis of), his administration, V. 501, IX. 851-his pationage of Burke, V 775

- forest of, XVI 297. Rocks, composition of, II. 390, 391-blasting of, IV 755—boring of, V. 44 stratified arrangement of, 233; d rived from the crystalline, XVII 619origin and classification of, XV 129, 155—igneous, 131—volcanic, ib. 190—trappean, 134—granitic, 136—aqueous, 139-chemical and organic, 141-aerial, 150 — metamorphic, 130, 150, 153 — mechanically-formed, 139—in landscape gardening, XVII. 773 — ancient vol-canic, XXI. 606

ROCKY MOUNTAINS, in North America, XIX. 242, II. 674; XVII. 594, 645; XXI 420—goat and sheep of the, XIV 211, 213.

Rocou, VIII 296. Rocquancourt, aqueduct of, III. 336. Rockov, in France, XIX, 243, Rod, fishing, III 150, 152

a measure, V. 736

- discharging, in electricity, VIII. Rodentia, XIV. 177, 135; II 774, XVII 632-their bones, III 76 et seq -muscles,

91-organs of smell, 94-nervous system, 103-intestines, 110, 111-odon-tology of, XVI. 453, III. 106-of America, II. 713.

Roderick, king of the Goths in Spain, XX. 460.

Rodez, in France, XIX. 243. Rodger (Lieut), his life-laft, XIII 439 Rodgers (M1), on preserving tumber from dry rot, XVI. 99.

- anchor, III. 118, 119; XX. 24, 25 Rodier (M.), on the composition of the blood, XVII, 664.

Roduger (Æmilus), philologist, XVII. 533 Rodull (General), XX. 478. RODNEY (George B), Lord Rodney, XIX. 243, XX. 132—his defeat of the Spaniards, V. 493-De Grasse defeated by. 500.

Rodosto, Turkish town, XIX. 244 RODRIGUES, or Rodrique, island, XIX 244;

Rodriguez (Manuel), on the Amazon, XVI SI.

- Jesuit, XII. 752

Ros, XIX. 244-of the salmon, as a buit, III. 156 See Ova

—— deer, XIV. 208—hunting of, XII 40—fossil, XVII. 171—a pairing animal, river, XIII. 680

- Shetland islands, XX, 113, Roc-stone, XV. 146. See Oolite.

Roebling (Mr), his suspension bridge over the Niagara, XIL 590 ROEBUCK (John), XIX. 244—site of the Carron iron-works selected by, XX. 702.

ROEMER (Olaus), XIX. 245-on the successive propagation of light, L 614, II. 85, IV. 74; XVL 584—his astronomical labours, III 802—on thermometers, IV 457-his transit instrument, 152-his thermometers, XXI. 221—on the micrometer, XIV. 745, 747.

(J. Charles), his works on insects,

IX 8.

ROERMONDE, in Limburg, XIX. 245. Roesel, his work on insects, IX. 4 Roeslerstamm, his works on insects, IX.

ROGATION-WEEK, XIX. 245. Rogenia, genus of fishes, XII. 237. Roger, king of Sicily, XX. 257, 268introduced into Sicily by, VIII. 276;

XX. 292 ROGER-DE-HOVEDEN, XIX. 245; XI. 779. ROGER-DE-WINDOVER, XIX. 245. Rogers (Samuel), English poet, XIX. 245.

122, 123,

- (M.), his dialytic telescopes, XXI.

ROG-ROM

Rogers' boiler for hot-houses, XL 722 (Piof H. D), on faults in rocks, XV. 176-on the silurian rocks of North America, 197 - on the carbonifeious locks of United States, 204-fossil reptiles discovered by, XVII 133.

(Woodes), XVIII 269.

Roget (Dr), his Bridgewater Treatise, V. 364-on magnetic curves, XIV 46, 47his galvanoscope, XXI 642-on medusæ, 996

Roggewein (Jacob), his voyages to the Polynesian islands, XVIII 277, 279. Rogie, Falls of, XIX 426

Rogniat (M), on the Roman knights, III

Rogue-money, VII 467.

ROHAN (Henri, Duc de), XIX. 248 - arms of the family so named, XI.

ROHAULT (Jacques), Cartesian philosopher, XIX 249—Dr Clarke's translation of his Physics, VI. 757.

ROHILCUND, XIX 249; XVI. 301; XVII

Robillas, XI 480-Warren Hastings' treatment of, V 520; XI 490, XIX. 240. Rohita, genus of fishes, XII. 257.

Rohri. See Rorce. ROLAND (M J P), XIX 249—her character of Condorcet, VII 238

(Mr), on fencing, IX. 503, 504. ROLLE (Michel), mathematician, XIX 250
—his objections to the differential calculus, L 649; IX. 673.

Rollers, agricultural, II 273-used in coining, VII. 89, 90-printer's, XVIII 547,

birds, XVI. 765 Rollet (M. Brun), on the White Nile, XVI. 271.

ROLLI (Paolo Antonio), Italian poet, XIX. 250.

ROLLIN (Charles), XIX. 250. \_\_\_\_\_ (Ledru), X. 218, 223, 230, 338. Rolling of a ship, XX, 153 and n 1—cause

of, 161-influence of form on, 162. Rolling-mills, in iron manufacture, XII 561—in silver coining, VII. 89, 90. Rollo, XIX 251, VIII. 664.

- (D1), his manner of treating diabetes, VIII 24

ROLLOCK (Robert), of Edinburgh, XIX. 251; XAI, 482

Rollox (St), chemical works of, X 650 Rolls, Master of the, XVIII. 816. ROMA (Comarca di), in the Papal States, XIX. 252.

ROMAGNOSI (G. Domenico), XIX. 252. Romaic language, XI. 22; XIII. 210. Romain, aeronaut, death of, 11. 179. ROMAINE (William), English divine, XIX.

Roman Catholic Church, the world in-debted to, for much of its present en-joyments, I. 14—the opposing of revelation to reason its most objectionable tenet, 21-its corruptions of Christianity in the sacrifice of the mass, 512; in the worship of images and saints, ib. 514—abuse of keeping the Scriptures and conducting public worship in a dead language, 527, 528 and n 2-disproof of the unchangeable character of, 528, n. 1—its infallibility, 531, 532orders in, VIII. 115, n. 5—colibacy of its clergy, VI. 362; policy of that measure, I. 527, n. 2—separation of the Greek Church from, XI. 34—points in which the Greek Church differs from, 85—European nations belonging to, IX. 894—funeral rites in, X 344—ordina-tion, XVI 703—differences of the Greco-Russian Church from, XIX 527 in Russia, 529-its missions, XV. 275mass, XIV. 339-sacraments, XIX. 567doctrine as to the Lord's supper, L 512; and purgatory, XVIII. 695—indul-gence, XII. 377; sale of, XIII. 724— churches in England and Wales, VIII. 745; in Scotland, XIX. 801-hierarchy in Ireland, XII. 532. See Popory, Pope, Reformation, Luther.

# ROM-ROM

ROMAN CATHOLICISM, XIX. 252

Catholics, in Canada, VI 158

Ineland, XII 475 et seg -Austria, IV. 317—Bayaria, 519—Belgrum, 616—Scotland, V 549, XIX. 801—their demonology, III. 211—Paganism mingled with their doctrines, ib, n. 2, 314—riots against, in 1780, V 491—Mi Pitt on their emancipation, 578—measures in Parliament for their relief, 490, 538, 549, 624, 625, 631, 638, 640, 652, XII 500, Sir Robert Peel's part in, XVII 363—Emancipation Act passed, V 656— Irish Catholic Association, 641, 642, 647, 653; XII 501—suppressed, V 653 -Catholic Board and Committee, XVI 403; XII. 501—none executed in Edward the Sixth's reign, VIII 710—penal laws against Irish, XII 492, 493, pat-tially repealed, 497—in England, VIII. 744, 745—number of, in the different European states, IX. 395—Germany, X 588-Holland, XI 588-places of worship and schools, in London, XIII 666—collision between the Catholics and Protestants in Scotland, in 1558, XIX 780-their intrigues in favour of

Queen Mary, 788

— cement, V. 742—plastering with, 744—decay of, on walls, 1b—its power of resisting compression, XX. 715

HISTORY, XIX. 294; XI. 542, 543
—invasion of Arabia, III 362—capture
of Athens, IV. 172—conquests in Britain, V 376 et seq -wars with the Carthaginians, VI 286 et seq.—Constantano-politan history, VII 302—occupation of Corinth, 368—wais with the Cimbri, VI 723—conquest of Ciete, VII 496 emigrations of northern nations by whom the empire was overthrown, VIII 650; X 455, 576, 577—empire, VIII 650; A 555, 576, 576—Enliner, X VIII 652—conquests in Germany, X 574 et seg—conquest of Illyrin, XII 364, Judan, 770, XVII. 194; Macedonia, XIII 775; Perganus, XVII. 410; Palmyria, 221—Spain, XX. 457—Augus with the Parthage VVIII. 210 wars with the Parthians, XVII 310 et seq., 435; Porsians, 435; Mithridates, XV. 284; XVIII 292; with the Goths, X. 727—Niebuhr's Roman History, XVI. 257, 259, 261; XI 546-Gibbon's Decline and Fall of the Roman Emplie. X. 611 et seq; XI. 540, 548—Ferguson's History of the Roman Republic, IX. 511-Sir G. C Lewis on the Credibility of early Roman History XVI 261-Helvetia subjected, XX 883-Syria under the Roman rule, 904, 910, 911wats with the Syracusans, 900—war with the Tatentines, XXI. 22 See the Chronological Table, VI. 678 et seq. Roman-candle, XVIII. 708.

ROMANA (Don P. Caro y Sureda), general, XIX 252.

ROMANCE, XIX. 253—of the age of chivalry, VI 622 et seq.—Persia the birthplace of, XV. 763—three cycles of, XVIII. 108—old French, 115—Egyptian, VIII. 442—10mantic sagas of Iceland, XIX. 690—writers of Sweden, 701 -languages, XIII. 528, 532.

Romand (Bal E. de), his work on insects, TX. 21.

Romano (Giulio), Italian painter, XVII. 69. See Giulio, Romano

- town in Italy, XIX. 354. Romans, their notions respecting a future state, L 459—their acclamations, II. 77 -abacus, 6-posture during meals, 80 -action at law, 118-adoption, 149adoration, 150 — mode of punishing adultery, 155—advocates, 157—adiles, 159—as, 186—agrarian laws, 245—agriculture, 250; XVIII. 212—altars, II. 631 —ambassadors, 652; XIII. 316—ana-tomical knowledge, II. 751, 752—demon-ology, III. 310—apprenticeships unknown to, 826-first employed the arch extensively, 443, 469—carpentry and joinery, 445—domestic architecture, 457 -theatres, 470-palaces and villas, ib. -numerals, 572; VL 418-army, III.

# ROM-ROM

629-armour, 632-artificers, 682gurs, IV. 240-banqueting 100ms, 421their mode of voting, 399—basilicæ, 485 -baths, 499, 505, III. 470-beards, IV. 527 - dining-couches, 564-bricks, V. 342, XVIII 431-burials, V 773-burning of the dead, 795—burying-places, VI 22—calendar, 76 et seg., 665, 666 camps, 122-candidates, 170camps in Butain, 327, XIII. 90 VIII 251; other remains there, 268encouragements to marriage, VI 362chariots, 422-cock-fighting, VII 50law (see Civil Law)—coins, 67; XV. 432, 436; XVI. 351, 353, 356, 381—colonies, VII 135—collegium, 113—comitia, 182 tribes, 183 -- commerce, 186-mines, 188 -concubinage, 229-ciowns, 522, 523dancing, 645 — decimyili, 690 — their opinions on dew, 765—dials, 775—dictators, VIII 8-divorce, 67-drama, 141 -duumviri, 270-dyeing, 273-their acquaintance with silk, 276-standard of the eagle, 366—Egypt under, 472, 474—feasts, IX. 494—knowledge of ethnology derived from, 342-sword used by, -feudal system, 520-exposure of children, 457-their possession of Gaul, X 1-gambling, 394-funcial rites and orations, 341-geographical discoveries, 463 — mathematical knowledge, 503—festivals and sacrifices to the dead, 509, 513 - gladiators, 640; VIII. Platebeast-fights, X 399-glass-manufacture, 657 — gymnasia, XI 168 — gynacca, 170—treatment of the hair, 182—trade with India, 460-horsemanship, 673hunting, XII 32-hydrostatical knowledge, 70-their treatment of the suimullet, 279, and the murana, 230informers, 380-insurance, 393-rate of interest, 428-irrigation, 621-religious toleration, 772—libel, 356 — libraries, XIII 385—acquaintance with the effects of light, 449-lotteries, 696-language (see Latin Language)-medical jurispiudence, XIV 422-origin and development of niedicine among, 453-sources of gold to, AV 231—monarchy, 412—census, 600—mourning, 668—municipal system, 680—mythology, 766—educa-tion, 808—nobles, XVI. 280—oaths, 399—their canals in England, 54—painting, XVIII. 58, 67, 69—pantominue, 258—parasites, 270—philology, 510—pectry, XVIII. 103—neglect of trade and political economy, 212—posts, 402—pon-tifex, 292—punishments, 565—provinces, primogeniture, 516—stamps, 521law regarding rape, 806—roads, XIX. 228, 308; in Britain, IV 666; in Scotland, 741, 742—period of their rule in Scotland, 741—sanitary measure4, 602 sculpture, 858 et seg — shipping, XX. 117, 118—shoes, 208, VI. 68—senate, XX. 43—slavery, 319—their imperfect acquaintance with the power of steam, 573-shorthand writing, 675-incantations resorted to for the cure of diseases. 812—their masonry, 710—knowledge of sugar, 791; of surgery, 812 et seq.—suicides, 799; laws against, 801—triumphs, XXI. 354—measures, 804; VII. 230—weights, XXI. 806—wines, See Roman History, Rome, Latin

ROMANS, The Epistle to the, XIX. 354. - French town, XIX. 355.

ROMANUS I. (Lecapenus), Emperor of the

East, XIX. 355 - II., XIX. 355.

III (Argyrus), XIX. 355

IV. (Diogenes), XIX. 355; VII. 315—his war with the Turks, II. 604. Romanzowite, mineral, XV. 85.

Romas on the electrical nature of light-ning, VIII. 582; XIV. 660. ROMBOUTH (Theodore), Flomish painter,

XIX. 356. ROME (Ancient), XIX. 856-destitute of academics, 11. 60—amphitheatres in, 729; III. 468—aqueducts, 383—streets, 471-closese, 143; VII. 2-architecture

# ROM-ROO

of, III 443, 469-built of brick, 444quantity of water brought to, 234capitol VI 219-houses do not appear have had chimneys, 555-e1a of its foundation, 666-circus, 733-catacombs. 330-crtizens of, 735-colossi at, VII 151-commerce, 186-emigration from, VIII 650-libraties, XIII 384, 433-state of medicine and surgery in, XIV. 453. XX. 812-diama in, VIII 141-architectural remains of, III 470 et seg., 486 et seg.—bakers in, IV 376raising the value of coins in, XV 436 -medical profession and literature in, XIV 453—plebenans of, XVIII 8, 9—customs duties in, XXI 63—legacy duties, 65—plan of, XIX. Plate See Roman History, Romans

ROME (Modern), rise of the modern city, XIX. 366-site of, 356-Academy of Lincei, II. 63-Academy of Painting, 68-academics of Belles Lettres. 70alum of, 639 - aqueducts, III 337dome of St Peter's, 413, 452-architecture of St Peter's, 455, 483, 484; XIV 738, of the Farnese Palace, 111 452, 479, 485 Pantheon, 469, 470, 484-temple of Jupiter Stator, 486-centre employed for the nave of St Peter's, 376-jubilee, XIII 14-libraries, 411, 412-coms, XV 442, 414-school of painting, XVII 67 -early printing, XVIII. 532-state of sculptine, XIX 800 et seq —French occupation of, in 1849, XII. 659—why it has become the centre of the Romish Church, I. 527 - railways connected with, XVII 245-disturbances at, in 1797, X. 107—measures, XXI. 805-weights, 806.

Romé d'Isle (M), on the lines characteristic of minerals and plants, III. 169on crystallisation, VII. 551

Romeite, or Romeine, muneral, XV 107 ROMFORD, in Essex, XIX 870.

ROMILLY (Su Sanuel), XIX 370—character of, I 394, n. 2, VIII. 241—his friendship with Dumont, ib—his objections to judge legislation, XIII. 269.

643.

ROMORANTIN, town in France, XIX. 372. ROMSEY, town in Hants, XIX 372

ROMULUS, XIX. 372, 296—supposed laws of, VI. 738

Ronalds (F.), his electrical machine, VIII. 536-his electrical telegraph, 543, 627on the electricity of the air, 578-his pendulum doubler of electricity, 615his improvements on electrometers, 622 -his electrograph, 626-his electrical pistol, ib -his atmospherical conductor, 627-his photographic register, XIV.

666. RONALDSHAY, Island, XIX. 372—South, XVI 718—North, 718, 719. Roncesvalles, battle of, XVIII, 701.

RONCRELIONE, in the Papal States, X1X.

RONDA, town in Spain, XIX 372. Rondani (C.), his works on insects, IX.

Rondelet (Guillaume), ichthyologist, XII. 204; XIV. 121

on the contraction and expansion of wood, XII. 816-his L'Art de fatir, 805; AX. 717, 718.

Roney (Sir Cusack P.), letter of, on Canada, VI. 145.

RUNNE, town in Denmark, XIX. 372. RONNEBURG, in Saxe-Altenburg, XIX. 372. RONSARD (Pierre de), XIX. 372—character of his poetry, XVIII, 116.

RONSDORF, town in Prussla, XIX, 373. Roop, land measure, XIX. 873. Roof, XIX. 378 — tile-roofs, V. 735 —

slater's work, 745 - plumber's work, 755 - mode of rendering fire-proof, XIII. 438, 439-roofing of ships, XVI.

99. See Carpentry.
Rook, bird, XVI. 764—its ficsh, 1X. 763—rook-shooting, XX. 216.

ROO—ROS

ROOKE (Sir George), XIX 400; V 445his capture of Gibraltar, 448

Rooms, proportion and arrangement of, III 488—heating of, by stoves, XX 739 et seq

Roonhuysen, Dutch accouchem, XX 818 Roos (Lord), case of, VIII 69 Root (square and cube), extraction of the,

III 606

Root-crops, II. 315

Roots of plants, V. 76-physiology of, 99cause of the formation of, XI 693-connection between them and the branches, XXI. 269-seek out the best soil for themselves, ab.—esculent 100is, Xi. 739, IX. 760

ROPE, XIX. 401-Coulomb on the stiffness of topes, VII 462; XIV. 407-strength of, XX 756-made of twisted oslers, II 688.

Rope-dancer, VII 646, IL 115, X 328. Rope-ladder, XIII 414

Rophites, genus of unsects, IX. 199.

Roque (La), his description of the coffeetice, VII 53.

- (SAN), in Spam, XIX 415 Requefavour, aqueduct of, III 336. Rouse, town in India, XIX. 415; XX. 305

Roiqual, species of whale, XIV. 235-in Greenland, XI 43.

Rorqualus, genus of mammalia, XIV. 231. Rosa (Salvator), XIX. 415

Rosacem, nat order of plants, V 190 ROSAMOND, XIX 415, XIII. 638. ROSARIO DE CUCUTA, XIX. 415; X 797.

ROSARY, XIX. 415, IV. 526; XL 740. See Chaplet.

- collection of roses, XI. 749. Rosas (General), V 290, 728, Roscelmus, of Complegne, nominalist, XVI, 284, XVII, 521 Rosetts (Q), comic actor, XIX. 416; VIII.

Roscos (Henry, Robert, and Thomas), XIX 419.

- (WILLIAM), XIX. 416-his Life of Lorenzo de Mediel, XIV. 448; of Leo X., ib -his translation from Aldus, IV. 710-his translation of Lanzi's History of Painting, XIII. 230-on the oppor-tuneness of the invention of printing, IV. 709-on Pope, XVIII. 320, n. 2.

Roscommon, XIX. 419 — extent of land under crop, XII. 516—produce of crops,

 (W Dimos), earl of, XIX. 422. Rosenta, town in Ireland, XIX, 423. Rose, XIX 423; Xl. 748, 748—rose order of plants, V. 190—roses of Arabin, III. 345, of Provins, XVIII. 646; Egypt, VIII. 431-wars of the Roses, 690, 694 -oil of; see Attar of Roses.

(George), his Act on Friendly So-cleties, X. 310.

in heraldry, XI. 326.

- (Sir Hugh), XVI, 310, 313, - (Stewart), his interview with Mezzofanti, XIV. 732.

Rose-colour, in dyeing, VIII. 292. Rose-quartz, XV. 69. Rose-window, III. 512.

Rose-wood, in Hondmas, XI, 612 Rosem, sub-order of plants, V. 191. Roseau, in Dominica, A1A, 428. Roselite, mineral, AV, 96.

Rosellan, mineral, XV. 79. ROSELLINI (Ippolito), XIX. 423-on ancient

Egyptian monuments, XI. 409, 431. Rosemary, plant, V. 202; X1. 745- oll of,

XVI. 407. Rosemiller on the codices of the Old

Testament, XIX. 832. ROBEN (F. Augustus), orientalist, XIX. 428 —on philology, XVII. 533.

- (Dr George), on the Ossetlan lan-

guage, XVII. 530. Itosoncuth, echo at, VIII. 578.

Itoseneau, in Hungary, XIX. 423. ——— in Transjivania, XIX. 423. Rosenberger on Halley's comet, I. S.C.

# ROS-ROT

Roses, attar of, XIX. 423 See Attar of Roses.

ROSETTA, XIX. 423; VIII. 497—attacked by the British in 1807, 492
——stone, VIII. 469; XI. 377—lan

guage of, 373-Dr Young's analysis of its inscription, 378—Porson's restoration of the text, XVIII. 369

Rosetta (G. V.), on dyeing, VIII. 273 ROSHEIM, town in France, XIX. 424 ROSICBUCIANS, XIX. 424, IV. 448; XV. 757.

Rosm. See Resin.

Roslin, XIX 424—chapel, III. 448; VIII 408.

Rosnay (Gaston), on iron bridges, XII.

Ross (Andrew), his micrometer, XIV 761 -microscopes, 764, 765, 781—object-glasses, 779, 780 (General), V. 617

(Sir Joen), XIX. 424—his arctic voyages, XVIII. 171, 172; X. 473; XI

(Sir J Clark), his antarctic voyage X. 475; XVII. 584; XVIII. 181; scientific results of, I. 995—magnetic poles ascertained by, 991, XVII 617—on the temperature of the ocean, VI. 777; XIV. 644-on barometric depression at sea, 667—his northern explora-tions, XVIII 172—lieutenant to Parry, XVII. 307

(Mr), his photographic process XVII. 548.

\_\_\_\_ AND CROMARTY, XIX. 425—vitri-fied forts in Ross, IX. 791, 792—fall of immense hallstones in Ross, XIV 659 agricultural statistics, XIX. 796, 797, 798-population, 799

in Herefordshire, XIX. 424 (NEW), in Wexford, XIX. 424 or Roscarbery, in Cork, XIX. 424, VII. 370.

Rossano, town of Naples, XIX. 427.

- Academy of, II. 63 Rossbach, battle of, XVIII. 653; XXI. 713, 714, 715.

Rosse (Earl of), his telescopes, I 863, IV

151; XXI 128-his mode of supporting specula, 130, 131; metals used in forming, 135; polishing, 139.

Rossi (Pellegrino), count, diplomatist, XIX. 428. - (De), on MSS. of the Scriptures,

XIX. 837. - (Pietro), his works on insects, IX. 8.

Rossia, genus of mollusks, XV. 400 Rossienv, in Russia, XIX. 428 Rossignol (Dr), his work on the lungs,

Rosswein, in Saxony, XIX. 428.

Rostan (M.), on animal magnetism, XX.

Rostellaria, genus of mollusks, XV. 388 fossil, XVII. 109

ROSTOCK, German city, XIX. 428—univer sity of, XXI 492.

ROSTOPCHIN (Fedor), count, XIX. 428; X. 157.

Rosrov, two Russian towns so named, XIX. 428.

ROSTRA, XIX. 428; X. 838 Rostrhamus, bird, XVI. 743. Rostrum of a ship, IV. 526. Rot (Dry) See Dry Rot.
—— in sheep, XXL 570.

Rota, town in Spain, XIX. 428.

ecclesiastical court, XIX. 428 ROTATION, XIX. 429; VIII. 364; XIV.

387-theory of, I. 824, 825-magnetism of, XIV. 9, 31—electrical, VIII. 554—Atwood on, IV. 234—in gunnery, XI 129-in plants, V. 68-Foucault's experiment on the rotation of the earth, L 855; XVII. 388—of a ship, XX. 13,

of crops, V. 98-advantage of, VI 525—in Essex, IV. 836—in the lowlands of Scotland, XIX. 798; in Aberdeenshire, ib.

Rotatory grates, XX. 354. Rotharis, Lombard king, XIII. 640.

# ROT-ROX

ROTHENBURG, XIX. 444. Rother, river, VII 754 ROTHERHAM, in Yorkshire, XIX. 444 ROTHESAY, XIX 444; VI 26-climate of, XIX. 795.

Rothière (La), battle of, X 166. Rothoffite, mineral, XV. 85 ROTHSCHILD, commercial house, XIX 444 (Mayer Anselm), XIX 444
 (Nathan Mayer), XIX 444

ROTTECK (K. W. Rodecker von), XIX.

ROTTENBURG, XIX. 445
ROTTERDAM, XIX. 445 — population, XI. 582-prison, 588

Rotula. See Patella. ROTUNDA, or Rotundo, XIX 445 ROUBLIAC (L François), XIX. 446.
ROUBLIAC (L François), XIX. 446—sculp-

ture of, 864. Rouble, Russian coin, XV 444, XIX 537,n

Roucou, III 257 See Anotta.
ROUEN, in France, XIX. 446—population, X. 277—suspension bridge at, III 491roof of the Salle des Pas Perdus at, XIX. 392.

Rouge, VIII 286. Rougé (M. de), on hieroglyphics, XI. 44. Rough-cast, V. 744. Roulers, town in Belgium, XIX. 447.

Rouloul, bird, XVL 791 Roum, coast of, IV 744.

See Sivas Round, in music, VI 332.

Table, knights of the, VL 622 Towers. See Towers. ROUNDELAY, XIX. 447.

Roundheads, V. 400 Roundsman's system of relief to the poor,

Rous (Sn John), V 500

Rouse (Mr), of Leicester, pneumatic experiments of, XVIII 67
Rousey, island, XVI 718, 719 ROUSSEAU (Jacques), painter, XIX. 447.

- (Jean Baptiste), XIX. 447—poetry of, XVIII. 117-his meeting with Voltaire, XXI. 657.

(JEAN-JACQUES), XIX 448; VIII 240-on the origin and history of language, I. 174-ments of his Emile, 184, its influence on education, XV. 809 Robinson Crusoe, VII. 697—his quantel with Diderot, VIII 14, with Hume, XII 5—on the impossibility of proving a miracle, XV. 265—his objection to the right of property, XVIII 228-character of his romances, XIX. 288-influence of his Contrat Social on the French Revolution, 233-Madame de Stael's ad-

miration of, XX. 524 Roussette, species of bat, XIV. 147.
Roussillon, XIX. 450; X. 277.
Roux (Polydore), on the acrid liquor of ants, III. 265—on birds, XVI. 731.

Rove and Roving-frames, XX. 510, 511. ROVEREDO, XIX. 450 Rovettus, genus of fishes, XII. 296.

Rovezzano (Benedetto da), sculptor, XIX. 860. Rovigno, XIX. 450.

Rovigo, XIX. 450.

- (Savary), Duke of, governor of Algiers, II. 574. ROWANDIZ, town in Turkey, XIX 450.

ROWE (Nicholas), XIX. 450 — dramatic works of, VIII 164—his dramatic read-

ing, XXL 172-sums paid for his plays, fb. Rowe's diving machine, VIII, 59.

Rowe's diving machine, Vill. 59.

Rowley (Thomas), Chatterton's forged poems of, V. 705; VI. 431; XXI. 410.

(WILLIAM), XIX. 451.

ROWNO, town in Russia, XIX. 451.

ROXANA, XIX. 451. Roxburgh Castle, death of James IL at,

XIX. 760. - (Dr), on the Tusseh and Arrindy silkworms, XX. 289, 290 Roxburghe (John), Duke of, sale of his library, XVIII. 582.

Roxburghiaceæ, nat. order of plants, V.

# ROX-RUD

ROXBURGHSHIRE, XIX. 451-agricultural statistics, 796, 797, 798—population, 799. ROXBURY, in Massachusetts, XIX 456. Roxo, cape, XX. 49

Roy (General William), XIX 456 - his barometrical measurements, I. 730, IV 465, 466-measurement of the difference of longitude between Greenwich and Pans, IX. 550—his measurement of the first base of the trigonometrical survey, 653-on the temperature of the air at different heights, VI 780-his share in the trigonometrical survey of Britain, XXI 330, 331

- (M. le), his work on Greek ruins, III 456-on dew, VII. 767

ROYAL, XIX. 456. - Academies, II 63 et seq

Academy of Sciences, Parisperiments in seamanship undertaken by, XX. 4, 10, 11

- Agricultural College, X 680 Agricultural Society of England, TT 265

- Bank of Scotland, XV 483 FAMILY, XIX 456

George, man-of-war, sinking of the, V 501.

in gunnery, XI 141

Institution in Edinburgh, VIII 396 - for the encouragement of the fine arts, 397.

Institution in London, I. 941, XIII. 674, XXI 230 Military College, II 71

OAK, XIX 456

Orders of Knighthood, XIII. 123 Society of London, XIII 674 —
origin and influence of, I 47, IV 452,
XIV. 461; XVIII 25, 33—Sh H Davy's
conduct as president, VII 672—library of, XIII 393-experiments on cohesion,

XX. 748. - Society of Edinburgh, VIII 397. ROYER-COLLARD (P. Paul), XIX 456 ROYLE (John Forbes), botanist, XIX. 457

-his work on the fibrous plants of India, IX. 657-on Indian hemp, XI 313 ROYSTON, XIX. 457.

ROYTON, VIllage in Lancashire, XIX. 457 Rozier (Pilatre de) See Pilatre RSHEV-WLADIMIROV, in Russia, XIX 457,

RUBBER (India), XIX. 457. See Caouichouc.

Rubble walls, V 738 Rubellan, mineral, XV. 78. Rubellite, mineral, XV 89.

RUBENS (Sir Peter Paul), XIX. 457; XVII. 56—character of his pictures, 74; III 710—his pictures at Antwerp, 287—anecdote of Van Dyck, his pupil, and him, XXI. 520.

Rubicon, Italian river, XVII. 242—crossed by Cæsar, XIX. 325

RUBINSK, in Russia, XIX. 460. RUBRIC, XIX 460

RUBERIC, XLX 460, KIL 753; X 469.
RUBY, XIX. 460; X. 447—crystallisation of, VII. 563—ortiontal, XV 87; XVII 623—gpinel, XV 87—Balas, ib—Almadine, ib—Ely-rubles, IX. 544—dichroism in, XVL 666

Ruby-blendes, XV. 121. Ruby-type, XXI 401, 402, 403. Rucelleri. VIII. 147.

Rucker (John A.), on the number of collisions at sea, VII. 131.

Ruckert, German poet, XVIII. 119.

Rudbeck (Olaus), his discovery of the distinction between the lacteals and lymphatics, II. 761.

Rudberg (Prof.), on the coefficient of expansion of gases, I 957 and n 4—on optics, XVI 546, 659.
RUDDER, XIX 460—its action on a ship,

XX. 14, 17, 159-uscless in balloons, II. 173.

RUDDIMAN (Thomas), XIX. 460; VIII. 408; XVIII. 529—on grammar, X. 763 n, 770 n. 2 et seq.—hls edition of George Buchanan's works, V. 720, 787—Chalmers' Life of, VI. 402

# RUD-RUP

RUDING (Rogers), XIX. 461—on ancient British colnage, VII 69, 70 et seq—on the constitution of the Mint, 74—his Annals of the Comage, XV n. 2

Rudolph of Hapsburg, XX. 884, IV. 302 Rudolphi on the villi of the fleum, III 61 on intestinal worms, XXI. 974, 975 et seq.

RUDOLSTADT, XIX 461, 782 Rudyerd (John), XIII 465

Rue (A. de la), his work on insects, IX. 18

(Charles De La), XIX 461—on
Anglo-Norman poetry, VIII 794 (Warren de la), his electric battery, XXI, 613.

order of plants, V 188 plant, XI 745

RUEIL, town in Flance, XIX 462. Ruff, bird, XVI 804

Ruffini (Paolo), on equations, IX. 306. RUFFO (Fabrizio), cardinal, XIX 462 Ruffus, or Rufus, of Ephesus, his anato-

mical knowledge, II. 752-his skill in

surgery, XX. 813. Rufinus, XIX. 462.

Rugby school, XIX 462 - Dr Arnold's superintendence of, III 672.

- in Warwickshire, XIX. 462-savings-bank at, 665 RUGELLY, or Rudgeley, in Staffordshire,

XIX. 463 RUGEN, island, XIX 463 RUGENWALDE, town of Prussia, XIX 463

Ruglen See Rutherglen Ruhmkorff (M), his induction coil, XXI 649-his mode of igniting gunpowder, 637.

RUHNKEN (David), XIX. 463; XVII 524. Ruins in Syria, XX 909, 910 Rukchu, in Ladak, XIII 149.

Ruland (Dr Anton), on the Palatine Library, XIII. 411, n. 1. Rule, XIII. 253

Rulettos, in engraving, XIV. 734. Rulhicie (M.), on the partition of Poland, IV. 391

Rullion Green, battle of, V. 428 RULSK, town in Russia, XIX 464. Rum, XIX 464, IX 760—manufacture of,

VIII 51; from molasses, XV 311. - Island, XIX 464

Itumbling Brig, VI. 749, VIII 260. Rumbold (Sh Thomas), his gains in India, IX. 492—charges against, V. 500. RUMFORD (Count), XIX. 464. See Thompson (Sir Benjamin).

- (Madame), I. 941, n. 2 - Prize, I 941.

Rumili, or Rumeha, XIX. 464—coast and ports of Rumelia, IV. 742.

Ruminantia, XIV. 202, XVII 632-bones, III 76 et seq.-muscles, 91-organs of smell, 94—eyes, 97—ears, 98—tongue, 100—nervous system, 108—œsopliagus, 108-stomach, ib.-intestines, 110-den-100—Stollard, 10.—Incomposite S. IVII. 160, 172—fat from, XVI. 496; XVII. 169, 172—fat from, II. 713—Africa, 217.

Rumker's catalogue of stars, IV 95. Rump Parliament, V. 411; XIII. 165.

Runginan (Alexander), painter, XIX. 464. RUNGORN, town in Cheshire, XIX. 464. Runeberg (J. Ludvig), Finnish poet, XIX.

RUNES, XIX. 464, 689. RUNGPOOR, XIX 464.

701.

Runic alphabet, II. 615-mythology, VIII.

388 See Danes, Goths. RUNJERT SINGH, XIX. 465; V. 667, 669 XI. 509

Runn, salt morass in Cutch, VII. 597; XI. 449.

Runner, in plants, V. 79 Running, muscles used in, III. 42.

Runnymede, VIII. 677.

Runiz (M. de), his mode of gilding-by olectric battery, XXL 637.
RUPEE, XIX. 465; XV. 442, 445—lac of rupees, XI. 494, n.—crore of rupecs,

RUPEUT (Prince Robert), XIX. 465—his military operations in England, 403 et

### RUP-RUS

seq -invention of mezzotinto engraving improperly ascribed to, XIV. 733. XX. 270.

Rupert's drops, XIX 465; III. 218-electrical flash at the buisting of, VIII 564
—their power of depolarisation, I. 912

- (Prince), metal, XVIII 516 Land, X. 346.

river, X 346 Rupicola, genus of birds, XVI. 757 Ruppell (Dr Edward), on Abyssinia, II 55,

RUPPIN (New), town in Prussia, XIX. 465 Rupture. See Herma.

Runc, XIX 469, 474 Rusa, genus of mammaha, XIV 218

Rusehus, VII. 316. RUSH (Benjamin), physician, XIX 466, XX. 819

- common, its fitness for making paper, XVII 248-rush-bearing, ancient custom in Derbyshire, VII 756

- flowering, order of plants, V. 214. order of plants, V 213

town in Ireland, XIX 466. Rushton and Eckersley's iron-works, XIL 558

RUSHWORTH (John), XIX 467 Ruskin (Mr), on Milton, XV. 23. Rusniaks, in Hungary, XII. 11. Russel (Dr), on serpents, XIX. 46, 62, 64 et seq.

Russell (Admiral), V. 445.

(Dr A), on the plague, XVII 749 (Dr Patrick), on the plague, XVII. 748 et seg

(John), his account of Beethoven, IV 590

(John Scott), on waves, I 888; XI 218-on the motions of vessels and waves, XII. 76-on the tidal wave of estuaries, XVI 64—on the parabolic profile for breakwaters, XI 220—experiments on the Forth and Clyde Canal, XX 136, 137-on the influence of a vessel's shape on her speed, 662-Great Eastern steam-ship built by, 605-yacht Titania built by, 139.

(Lord John), his measures for obtaining parliamentary reform, V. 692, 695, 697, 697, 660—Reform Bills introduced by, 661—his motion regarding the Irish Church, 664; for a national system of education, 666—prime minister, 670; resignation, 672—his plan of relief to the West Indies, 671—his Life of Lord William Russell, XIX. 467 the free circulation of books, XIII 380—his Memoirs of Moore, XV. 533

- (Mr), his improvement on locks, XIII 534

· (P10f.), his air-pump, XVIII. 41. --- (Robert), on the climate and agri-culture of Scotland, XIX. 811, 795, 796. (WILLIAM), lord, XIX. 407; V. 433. (WILLIAM), historian, XIX. 468.

Russia, XIX. 469; IX 402-Russian arc of meridian, I. 854—Imperial Academy of Sciences, II. 65—Academy of Arts, 67-American colonies, 707-alphabets, 614—geographical discoveries, XVIII 170; in North America, II. 465; in Asia, III. 753 - settlements and commerce in the Aleutian Isles, II. 464, 465 -army, III. 647 - Asiatic commerce, 755 — policy of, towards Austria, IV. 221; influence with Austria, 320 baths, 506-bibles, 702-Bible Society, 704-commerce and fleet on the Black Sea, 744, 745, 746—armed neutrality, V. 494; VII. 742—designs against France, in 1791, V. 540-trade with Bukhara, 759—commercial intercourse with China, VI. 591—war with the Circassians, 342—Cossacks, VII. 423; VIII. 100-consumption of cotton, VIL 453, 460—Czar, 613—law of copyright in, 453, 460—Czar, 613—law of copyright in, 359—trade with England, VIII. 732, 733 —language, IX. 391; XIII. 214—fairs in, IX. 469—war with Turkey, X. 144 wars with France, 113, 145, 153; V. 565 -Napoleon's invasion of, X. 154; XV. 795-relations with I rance in 1806, X.

#### RUS-RYE

142-French trade with, 259-intrigues of, in the East, 209-Georgia given up to, 568—fur-trade, 347—hemp, XI 312, 313—crown of, 335—Greek Church in 34—Jews in, XII 783—Jesuts expelled from, 756—rate of interest, 432—libraries, XIII 425-variations of the needle in, XIV 54, 55—magnetic observations in, 18, 60—domestic manufactures, 282 -high price of iron in, 284-Permian rocks of, XV. 205 — Phocene, 215 — mines, 231, 236, 239—metallic produce of, 233, 248; XVIII 462—coins of, XV. 412, 441; XVI. 389-sacerdotal power of the Emperor of, XIV 459-height of mountains, XVII 643, 641-rivers, 646, 647 — war with Turkey, France, and Britain, 198, XXI 875, with the Poles, XVII. 146 et seq -with the Prussians, 652-increase of population, 342 - postal system, XVIII 424 - navy, XX. 138—animal magnetism in, 445invaded by Gustavus Adolphus, 848wars with Sweden, 853 et seq; V 530 -masonry, 711-stoves, XX. 739, 740proportion of suicides in, 800 - consumption of tea in, XXI 91-wais with Turkey, 370, 371, 373, V 538-universitics, 492—weights and measures, 813—wines, 886—maps of, XIX. Plates

Russia, Asiatic, XIX. 547 Russian Company, XII 818; XIX. 473.

Lapland, XIII. 342.

- Sable, X. 347

Russians, then skulls, III 29-military character, 649 — then relations with Japan, XII. 699

Rust, disease in grasses, V 172 Rustonuk, town in Turkey, XIX. 553, VII. 653.

Rustici, sculptor XIX. 861. Rustre, in heraldry, XI 330. Rutacem, nat order of plants, V 188. Rutela, genus of insects, IX. 123. RUTH, book of, XIX 553

Cst), General, XII 491. Ruthenium, metal, VI 499 Rutherford (D) John), his register thermometer, I 763; XXI 221—on the

ratio of the circumference of a circle to its diameter, X 532. - (Samuel), divine, XIX. 553.

Rutherfurd (Andrew, Lord Advocate), his modification of the law of entail. VIII. 816-his Registration Bills, XVIII, 840 RUTHERGLLN, XIX. 554

RUTHIN, town in Wales, XIX. 554. Ruthven, raid of, XIX. 788. Ruthven's water-jet propeller for ships,

XX 661. Rutile, mineral, XV. 110-in Perthshire,

XVII. 456 RUTHLUS LUPUS, Roman rhotorician, XIX. 554.

- Numatianus (Claudius), Laim poet, XIX. 554.

RUTIANDSHIRE, XIX. 554; VIII. 754. RUTIANDSHIRE, XIX. 554; VIII. 754. RUTIAGHERRY, in India, XIX. 555. Rutter (Mr), his galvanoscope, VIII. 572. Rutting season of animals, III. 182; XIV. 204—in sheep, II. 348. RUTULI, XIX. 555.

Runscher on cochineal, VIII. 283.

RUYSCH (Frederic), XIX. 555; XX. 818anatomical discoveries of, II. 762, 800on birds, XVI, 726.

Ruyschian membrane in various animals, III 96.

RUYSDAEL (Jacob), painter, XIX. 556. ROYTER (M. Adrian), Dutch admiral, XIX. 556; V. 422, 423, 426; XI. 576.

Ryacolite, mineral, XV. 70.
Rycaut (Sir Paul). See Ricaut.
Rype, in Isle of Wight, XIX. 556; XXI.

Ryder's forging machine, XII. 564. Rxx, grain, XIX. 556—culture of, II. 212—as food, IX. 759—northern limit of, XVII. 630—ergot of, IX. 324. town in Sussex, XIX. 556.

Ryegrass, II. 323-saving the seed of, 831. (Italian), culture of, II. 327-for milch cows, VII. 622.

# RYE—SAC

Rychouse plot, V. 433; XIX 468. Ryerson (Dr), on education in Canada, VI. 157; XV 821. Ryland on John Bunyan, V 764.

Ryland's sheep, XI 349.

RYMER (Thomas), XIX 557—his dramatic criticisms, VIII 163, 164 RYOTS, XIX 557, XI 518, 519—of Cutch, VII 589—of Bengal, IV. 650

RYSBRACK (Michael), sculptor, XIX 557 - (Peter), painter, XIX 557.

Ryssonotus, genus of insects, IX. 128 Ryswick, peace of, IV 303, V 446 Rytina, genus of mammalia, dentition of, XVI. 443

Ryzæna, in zoology, XIV 167. Rzeszow, Austrian town, XIX 557.

# $\mathbf{S}$

S, letter of the alphabet, XIX. 558-in abbieviations, II 20. Saabs, race of Hottentots, IX, 353

SAAD-EN-DEEN (M Effendi), historian, XIX. 558

SAADI (Moslih Eddin), Persian poet, XIX 558

SAALE, river, XIX, 558 SAALFELD, German town, XIX. 558 Saune, Swiss river, XX 888, X 304. SAARBRÜCK, Prussian town, XIX. 558. SAARLOUIS, Prussian town, XIX 559. Saars (M), on a species of medusa, XXI 997.

SAATZ, Bohemian town, XIX. 559. SAAVEDRA FAKARDO (Diego de), XIX. 559

(Alvarez de), his visit to l'apua, IV 262 Saban, III. 361.

SABARA, town in Brazil, XIX 559. SABATIER (André Hyacinthe), XIX 559 - French surgeon, his system of una-

tomy, Il. 767 Sabatino, lake, temperature of, VI. 777. Sabatin XIX. 559, I. 467 n 3, 502 n.its observance in England in the reign of James I., V. 384—play acting on, XXI 169.

Sabbathier (M), his account of the Babylonians, IV. 346.

Sabbatice (AbbO), X. 49.
Sabbatice (AbbO), X. 49.
Sabbatica (4.), XXI, 227
Sabbionetta, town in Italy, XIX, 568
Sabella, genus of annelides, XI 291, 294. SABELLIUS, XIX. 563 - on the Trinity, XXL 194.

Sabine (General), his observations on the pendulum, I. 851, 853; IX. 573, 574his magnetical observations, 1. 995; XIV. 18—his magnetic charts, XVII. 617—river and lake, XXI. 160, 161.

SABINI, XIX. 563, 295 Sabinus (George), Latin poet, XIX 564 Sable, in zoology, XIV. 154—its fur, X

347. - in heraldry, XI 324. - island, XVI 314.

Santé, town in France, XIX. 561. SABLES D'OLONNE (LLS), town in France, XIX. 564. Sabooa, ruins of a temple at, XVI. 349.

Sabzawan, town in Persia, XIX. 564. Sacadina, in Borneo, V. 47. Saccardo, his work on the slikworm, IX.

SACCATOO, in Central Africa, XIX. 564; VI. 752. See Sakatu and Sokoto. Saccharine principles of plants, II. 279; IX. 755; of animals, 756.

Saccharite, mineral, XV. 71. Saccharometer, V. 319. SACCHETTI (Franco), Italian novelist, XIX.

565. SACCHI (Andrea), painter, XIX. 565. SACCRIMI (A. M. Gasparo), musician, XIX. 565.

Saccobranchiata, order of mollusks, XV.

Saccobranchus, genus of fishes, XII. 263. Sacordotal stage of Greek medicine, XIV.

# SAC-SAG

451; of Roman, 453; of modern, 457sacerdotal influence in the eighteently century, 462

SACHEVERELL (Dr Henry), XIX 566-Atterbury's exertions in his favour, IV. 189.

Sachot (Father), IX. 487. SACHS (Hans), XIX 566 SACK, wine, XIX. 566, XXI 884 SACRVILLE (Charles), XIX. 567. (Lord), V 498.

(Lord George), V 464
(THOMAS), Lord Buckhurst, XIX.
566—poetry of, XVIII, 121. acıal vertebræ, III. 76.

SACRAMENT, XIX 567; XXI. 219—under the law, I 482, under the gospel, ib.— Luther's controversy with the Zwinghans regarding the sacraments, XIII. 736-Popish saciaments, XVIII. 336. See Baptism, Euchaust, Lord's Supper. Sachametro, river, XIX 567, VI. 96—

city, XIX 567-county, VI 99. SACRED, XIX. 567-philology, XVII. 518

SACRIFICE, XIX 567-in callest times, I. 454-erior of introducing into the gospel dispensation, 510—priests appointed for, ib.—Egyptian, VIII 439—Roman, IX 510, 519—sacrifices of the North American Indians, II. 681 - in the Christian Church, derived from Judaism and Paganism, I. 510

anta ragamsin, 1, 510

(Human), XIV. 361—in Ashantee,
III. 727—in Dahomey, VII 620—by the
Druids, VIII. 184—in India, XI. 470.
SAGRILAGE, XIX. 568—French law of, X.

SACRO-BOSCO (Johannes de), XIX. 568. Sacrum, human, III. 6.

SACY (A. I Silvestie de), XIX 568-on hieroglyphics, X1 378.

- (L ISAAC LE MAISTRY), XIX. 568; XIV. 100-his French Bible, IV. 701. Saddle, M. 675, 685-seat in the, 675 ct

Saddle-backs, in coal beds, VII. 117. Saddle-galls in horses, XXI, 578. Saddlery, exports of, from Britain, XIII. 31 1.

SADDUCKES, XIX. 568; VI. 288; XVII.

Sadi, Persian poet, XVII. 429. SADLER (Michael Thomas), XIX, 569. - (Sir Ralph), XIX 570, 773.

(WM.), adronaut, death of, II. 179. Sadoleto (Jacopo), cardinal, XIX, 570, Sa'ced Pusha, VIII 495. Safe locks, XIII, 542. Safety-lamp, Sir II. Davy's, I. 969; VII.

124, 671-G. Stephenson's, I. 883. Safety-locks for guns, XI. 99. Safety-valve, XII. 179. See Valve. Safet, town in Morocco, XIX. 570.

Safflower, V. 197-as a dyestuff, VIII. 286 -oil from its seeds, XVL 495-quantity

imported, VIII. 735.

SAFFROM, XIX. 570; V. 212—ns a dyestuff, VIII. 227—culture of, in France, X. 248.

- meadow, V. 213. SAPPRON-WALDEN, in Essex, XIX, 570. Saga, XVI, 316; XIX, 690—folk's saga,

Sagamen, XIX. 689, 690. Sagar, Prussian town, XIX, 571. Sagarelli (Gerhard), III, 306. SAGE (Alain Rend Le), XIX. 571-novels of, 286, 287.

— (M. Le), on gravitation, I. 136, n. 2.
— plant, V. 202; XI. 746.
Sagging of ships, XX. 180.

SAGUALIEN, Island, XIX. 572.

Sagital suture, 111, 24, SAGITTA, XIX, 572; IV, 80, 83, SAGO, XIX, 572; V, 314—quantity imported, VIII, 735—tree, II, 680; XX. 804-false sago, V. 210.

Sagouins, monkeys, XIV, 148. Sagra, genus of insects, IX. 147. Sagrides, family of insects, 1X. 147. Saguinus, gonus of mammalla, XIV. 143. SAGUM, XIX. 572; XVII. 224.

### SAG-SAL

SAGUNTUM, XIX. 572—siege of, by Hannibal, XI. 208, XV. 697—taken, VI. 293, XX. 457

SAHARA, XIX. 573; II. 212, 216, XVII 614-countries of, II. 225-casis in, X.

Sahidic version of the Bible, IV. 700, XIX.

Sahlberg (C. L), his work on msects, IX.

Sahlite, mineral, XV, 8L Sai, river in Oude, XVII 15 Saida, or Said, town in Syria, XIX. 573 See Sidon Saigey (M.), on the earth's ellipticity, IX.

Saigon, town of Anam, XIX. 573. SAILING, XIX. 573—various methods of, XVI. 7 et seq.—on a wind, XX. 125. See Seamanship

Sailors, utility of training to, VIII. 25number employed in British vessels, 739 -desertion of, during war, XIII 288diseases of, XIV 442-impressment of, IX. 776; XII. 365; XVI 106-discipline of XX. 28. See Navv.

Sailors' homes, XVI 119. SAILS OF SHIPS, XIX. 573of windmills. XIV. 417-inapplicable to balloons, II. 173-to set, make, &c., sail, XIX. 573--combination of steam with, XX. 21.

Samiri, in zoology, XIV 143. Samfoin, culture of, II 329—wild, in Glou-

cestershire, X. 679 Sainovies (John), on the Turanian languages, XVII 535.

SAINT, XIX. 573, I. 489—invocation of saints, 514—Popish doctrine of the intercession of, XVIII 337—modern Egyptian, VIII 447. See Canonisation.

Saint's Mountain. See Pir Panjal. Saint-Arnaud (Leroy de), marshal, XIX. 573, 501, 504. See Arnaud (St), mar-

Saint-Croix (Godin de), a French poisoner, III 330.

Saint-Cyran on annuities, III. 221.

SAINT-SIMON (C. Henri), Comte de, XIX. 573; VIL 210-his system, ib. 211. - (LOUIS DE ROUVROY), Duc de,

ST ANDREWS, XIX. 575 See Andrews, St ST ANTONIO, or S. Antao, Island, XIX. 575;

XXI. 544. ST CATHARINE'S, in West Canada, XIX. 875

St Clair, lake, VL 137. See Clair (St) Sr George, island, XIX. 575; IV. 336.

St Hilaire (Geoffroy). See Hilaire.
St Hyacinth, in East Canada, XIX. 575
St Iago, or San Thiago, island, XIX. 575;
XXI. 543.

St Jago de la Vega, XII 680.

St John (Henry). See Bolingbroke.

— river, XVI 162, 163.

ST JOHN'S, New Brunswick, XIX. 575; XVI. 164.

- Newfoundland, XIX. 575; XVI. 171.

St Just, X. 83 et seq. St Michael's, island, XIX. 575; IV 336 ST NICHOLAS, or S. Nicolao, island, XIX. 575; XXI 544.

Sainte (La Haye), V. 620 Saintes, French town, XIX 575. - (Les), islands, XL 72. Saintonge, in France, XIX. 575; X. 277. Sais, in Egypt, XIX. 575; VIII. 497. Sakatu, II. 229. See Sokoto.

Saki, monkeys, XIV. 144. Sakkar, town in Oudh, XX. 305. Sakkarah, pyramids of, VIII 501.

Sal, one of the Cape Verde Islands, XXI.

Sal-ammoniac, H. 719; XV. 99—from distillation of coal, XH. 665, n.; X 433.
Sala, silver mine in Sweden, XX. 862. Salada (R10), XVII. 777.

SALADIN, or Salah-ed-Deen, XIX 576; II. 22; VIII. 480, 481; XVI. 341—his partial conquest of Arabia, III. 863—his friendship for Bohaddın, IV. 811—his war with the Crusaders, VIL 525, XVII. 196-Jerusalem taken by, XII. 735.

### SAL-SAL

Salads, IX. 761-culture of, XI. 743. SALAHIEH, town in Egypt, XIX 576 SALAMANCA, in Spain, XIX 576—battle of, V. 611; XXL 825, 712, 713-university of. 492

- in Mexico, XIV. 724. Salamanders, XIX. 88—verteblæ of, III 86—case of one which lived two months without the head, 176-fossil, XVIL

Salamandridæ, XIX 82 Salamıs, XIX 576—defeat of Xerxes at, IV 200; XX 500. Salang, island, XIII 20.

Salano, island, XIII 20

Salanx, genus of fishes, XII 247 Salar ferox, fish, XII. 242—angling for, TTT 156

Salaman road, XIX. 228 Salarias, genus of fishes, XII 309 Salas (La), V. 53 Salatis, Egyptian king, VIII. 457

SALAYER Islands, XIX. 577. Salcey forest, XVI. 297

Saldana (Rio), sulphate of alumina from, II. 638 Saldanha Bay, X. 711.

- Duke of, XVIII. 391, 392 SALE (George), orientalist, XIX. 577—his version of the Koran, II 456, XV 303 - (General Sir Robert), V. 668; XI. 509

SALEM, in India, XIX. 577.

—— in Massachusetts, XIX 577; XIV.

SALEMI, town in Sicily, XIX. 577. Salenia, fossil echinoidea, XVII. 99, 100 SALEP, XIX. 577, V. 211

SALERNO, town of Naples, XIX 577; XX 241-bay of, 240-medical school of, 216

Sales, account of, in book-keeping, V 21. -(St François de), bishop, XIX. 578 SALFORD, XIX 578; XIV. 256 et seq .- free hbrary at, XIII. 406

Saliant, in heraldry, XI. 332. Salic of Salique law, XIX 578—reformed by Clovis, X. 3-in Spain, XX. 471, 477, 478.

Salicaceæ, nat. order of plants, V. 207. Salicaria, genus of birds, XVI 756. Saliceto (Gulielmus de), XX. 816. Saliem, V 207. Saliem (Antonio), musician, XIX, 578.

Salii, priests of Mars, XIX. 579 Salmas on melody, XV 715.

Saline stones, XV. 91 - ores, XI. 99plants, V. 221. Sahm, or Sahna, island, XIII. 502; XX.

246. SALINS, town in France, XIX 579-saltworks of, X. 251.

SATISBURY, XIX. 579-cathedral, III. 448, 481, spire of the cathedral, 410; XX. 735; arches of, 733-diminished moitality in, owing to sanitary improvemonts, XIX. 604—railways at, XXI. 879. - Countess of, XIII. 117.

- Crags, Edinburgh, VIII. 393 green-stone of, XV 190.

Plain, XX. 709—trigonometrical

base on, XXI. 331, 334-remeasured in 1849, 332,

Saliva, III 50; XVII. 659. Salivahana, era of, VI. 676. Salivary gland, III. 49

Salkeld (Lieutenant), his conduct at the siege of Delhi, XVI. 305. - (Mr Serjeant), on divorce, VIII. 69.

SALLEE, in Morocco, XIX. 580. Sallenders in horses, XXI. 578. Sallin on poisons, XIV. 424

Sallustius (C. Crispus), Roman historian, XIX. 580-gardens of, 359. - circus of, VI. 734. SALMASIUS (Claudius), XIX 580-on bap-

tism, IV. 423 - his controversy with Milton, XV. 26 Salminus, genus of fishes, XII. 246.

Salmo, genus of fishes, XIL 287. See - alpinus, XII. 241-angling for, III.

# SAL-SAL

Salmo errox, XII. 240, 241-its abundance in the Tweed, IX 616.

- salvelinus, XII. 241-angling for, III. 158

- umbla, XII 241.

Salmon, XII 238; IX 589-size of adult, 597; XII 239-varieties of, IX 596angling for, III. 151—as an article of food, IX. 763—salted, 607 and n, kippered, 768, preserved in ice, 767-effect of river water on the flavour of the flesh, 608 and n 2-modes of capturing, 617-migrations of, XVII 635-spinal cord of the, 669-in the Baltic, IV. 404. See Pair, Smoli, Grilse

— FISHERIES, XIX. 581—laws relating to, IX 599, 614—deterioration of, 607 of the Tay, 603 et seq; XVII 455— Tweed, IX. 606, 607; IV 680—Forth, IX 794 - Wye, XI 350 - England, VIII. 727—Cathness, VI. 62—Scotland, XIX 804—of Ireland, IX. 618; their produce, 623. See Fisherics
paste, III 156, n 1

Salmon-roe, as a bait, III 156 Salmon-trout, XII 240—its flesh, IX 763. Salmonidæ, family of fishes, XII 237, 245 -their geographical distribution, 330, 331 - unknown in the Himmalayan 11vers, XI 444

SALO, town in Lombardy, XIX. 581. Salon, town in France, XIX. 581.
town in Oude, XVII 17. SALONICA, XIX. 581—shipping of, XXI 385. SALOP, XIX. 582. See Shipping. Salopian ware, XVIII 437 Salpa, genus of mollusks, XV. 335. Salpi, lake, XX. 240.

Salpidæ, family of mollusks, XV, 334. Salpingus, genus of insects, IX 133 SALSETTE, island in India, XIX 582; V.

1, 4; XI. 491. Salsify, XI 740. Salso, river in Sicily, XX. 245. SALT, XIX. 582; XVII. 623; VI 485; II. 94—in mineralogy, XV 96—frigorific power of, VII 102, 104—crystallisation of, 545, 548-efflorescence of, in various countries, 550-antiseptic virtue of, III. 277—its use in preserving articles of food, IX. 767; VI 485—its alimentary properties, VIII. 21-a preventive of dry-rot, 211-its effects in dyeing scarlet, 290-its use as a manuic, 11 305, 413; and in the manufacture of chloride of lime, TV. 761-mountain of, at Candona, VI. 236-consumption of, in Britain, VIII. 727—produce of, in England and Ireland, XV. 247—its effects on vegetation, IX. 415—of the Sahara, II 226-saltness of the ocean, XVII. 572, of the Dead Sea, III. 762-lakesalt of Russia, XIX. 543.

(Mr), on hieroglyphics, II. 608. Lake, City of the Great, XIX. 588; II. 675-Mormon settlement at, XV.

sylvania, XVII. 396—Wurtemberg, XXI 958-Staffordshire, XX. 530.

Salt-desert in Persia, XVII. 420-in Khorasan, XIII. 78-Peru, XVII 472. Salt-duty, VIII. 727-in France, X. 251,

XXI 72—India, XI. 528. Salt-lakes, XVII. 591.

Salt-manufacture, VII. 551-of Bavaria, IV. 517-Bengal, 650-Droitwich, VIII 179—Durham, VI. 266—Assam, III. 764 —France, X. 251—Switzerland, XX. 889 on the shores of Solway Firth, VII.

Salt-mines, XV. 246-of Afiana, II. 439 of Austria, IV. 313-Brazil, V. 299-Berchtesgaden, IV. 660-Cheshire, VI. 528; XVI 246, 816—England, VIII. 727—Europe, IX. 387—of Bochnia and Wieliczka, in Poland, XVIII. 159-Persia, XVII. 422—Prussia, XVIII 669
—Punjab, 668—Russia, XIX. 517, 542, 542, 550—Wurtemberg, XXI. 938.

Salita, province of La Plata, XIX. 588; XVII 779.

# SAL—SAM

Saltane mills, description of the steam-machinery of, XX 603 SALTASH, town in Cornwall, XIX, 588-

iron bridge at, XII 601 Saltator, genus of birds, XVI 751. Saltatoria, family of insects, IX 157 SALTCOATS, in Ayrshire, XIX 588. Salter (Mr), on impressions on rocks, XVII. 131, 132

- (S J A), on the structure of the teeth, XVI. 410

- (T. F.), on trolling for pike, III 159, 160 Salterns, or salt-gardens, XIX 586

Salters and colliers formerly slaves in Scotland, XX. 320.

Salticus, genus of arachnides, III 384 Saltier, in heraldry, XI 329
Saltielo, in Mexico, XIX 589; XIV. 709.

Salting of food, IX. 767.

SALTPETRE, or nitre, XIX. 589, XV. 98— cooling with, VII 101—an ingredient in gunpowder, XI 151, 152-from the dung of bats, in Java, XII 704-colouied rings in, XVI. 651, 653; I 913, 914—as a manure, II. 305—used in preserving flesh, IX. 767—specific gra-vity of, XII 89—quantity imported, VIII 735.

Salts of iton, process in photography, XVII. 550

- in chemistry, VI. 499. Saluem, river, V. 778 Saluzzo, in Piedmont, XIX 589.

Salvador (St), XIX. 589 See San Salvador. - Island, IV 366 Salvadoracem, nat. order of plants, V. 199.

SALVAGE, XIX. 589 SALVANDY (N A), comto de, XIX. 589

Salvation, doctrine concerning, XXI, 215 -means of, 219. Salvator's (St), College, St Andrews, XXI.

474-its union with St Leonard's, ib. Salvatore de Renzi on the population and mortality of Naples, XV. 624.

Salverte on meteorolites, XIV 633. Salviani (Hippolito), ichthyologist, XII. 204; XIV 124

Salving of sheep, II 349, 351 SALWEEN, or Salnen, Indian river, XIX. 589, XXI 151. 

Salzes, mind volcanoes, III. 293. Samakov, or Samakoff, in Bulgaria, XIX. 500-iron ores of, XII 541

Samana, XI. 254. Samanian dynasty, in Persia, XVII 437. SAMAR, island, XIX. 590

SAMARA, XIX. 500-in botany, V. 138. Samarano, in Java, XIX. 591. Samarcand, XIX. 591—cultivation of as-

tronomy at, III. 795. SAMARIA, XIX. 591; XVII. 182-kings of, 193

Samaritan alphabet, II. Plate-language, XIII, 209-Pentateuch, IV. 695; XIL 692; XIX. 889; XVIL 519. Samaritans, XIX. 591.

Samarran, Turkish town, XIX 591. Samarskite, mineral, XV. 109 Samaveda. See Vedas.

SAMBAS, town in Borneo, XIX. 592; V. 47.

Sambon, in Austria, XIX. 592. Sambucus (John), XII 19. Samen Mountains, in Abyssinia, II. 55. Samneh, temples at, XVI. 349. Samnite wars, XIX. 304. Samnium, XIX. 502.

Samoah Islands. See Navigators' Islands.

Samojedic languages, XIII. 217. Samolus, plant highly esteemed by the Druids, VIII. 188.

Samos, island, XIX. 592-reduced by the Athenians, IV. 202-coins of, XVI. 876 -wine of, XXI. 886.

Samouelle (George), his works on insects,

SAMOYEDES, XIX. 593; IX. 345. Samphire islands, XIII. 75. Samphrey, Shetland island, XX. 118. Samsoon, in Turkey, XIX. 593.

# SAM-SAN

SAMUEL, XIX. 593.

- Books of, XIX 593 - Bulgarian king, VII 313

Samuelson (M1), his digging machine, II. 367

Samund Sigfusson, XIX 689-edda of, ib Samydaceæ, nat order of plants, V. 205 San Felipe, in Venezuela, XIX. 598

- FELIPE DE ACONCAGUA, in Chili,

Francisco, in California, XIX 598. JOSE, in Costa Rica, XIX 622. Juan de Dios, IV 810.

Juan (Fort), Nelson's expedition against, XVI, 132, 243

- Juan, in La Plata, XVII 779 Juan, in the Mosquito Territory,

- Juan river, IL 711; XV 663 XVI 243

LASSURGUI, in Sardinia, XIX 622 Marino, XIX. 622 See Marino, San Martin See Martin (General San).

Martino, sculptor, XIX 864 MICHELI (Michele), architect, XIX. 622, III 452

MIGUEL, in Central America, XIX. 622

Paolo Fuori, roof of, XIX 390 PAULO, in Biazil, XIX. 622—Jesuit's college at, V. 281—gold country near, 292—climate, 293—population of the province, 295

-SALVADOR, in Central America, XIX. 623

-Sebastian, XIX, 624-taken by the British under Wellington, V 613; XXI 826

 SEVERO, town of Naples, XIX. 624.
 VICENTE, town in Spain, XIX. 628. San-Benito, XII 390

SAN-JUAN-DE-LA-FRONTERA, XIX. 622 San-Louis, in La Plata, XIX. 622; XVII 779.

-Potosi, in Mexico, XIX. 622; XIV 718, 726

SAN-LUCAR, in Spain, XIX. 622. SANA, town in Arabia, XIX. 594; III 355.

Sanadine, mineral, XV 70 Sanadon (Noel Etienne), Jesuit, XIX. 591 Sanchez (Francisco), classical scholar, XIX. 594

- (Francisco), physician, XIX 594. Sancho, King of Portugal, XVIII 381. SANCHUNIATHON, XIX. 594—Bishop Cun berland's translation of his works, VII

SANGROFT (William), archbishop, XIX. 596 Sanctification, in theology, XXL 218.

Sanctorius, Italian physician, XIX. 596
—his invention of the thermometer, I 756; IV. 456—his experiments on the heat of the moon's rays, VII. 766—on artificial congelation, 104.

Sanctuary of Holyrood, VIII. 395. Sand, in geology, XV. 155—fixing of blowing sands, II. 364; VIII. 645—used in ing sands, il. 36t; Vill. 045—used in blasting, IV. 756; in glass-making, X 662—use of, in mortar, XX. 713

(George), novelist. See Dudevant. Sand-baths, X 358.

Sand-eel, IX. 764—mode of catching it in

Lapland, XIII. 442.

Sand-pipers, birds, XVI. 803, 805. Sandal, XX. 208.

Sandal-wood, its use in dyeing, VIII. 308
—in India, XI. 454. order of plants, V. 204. island, XVII. 240.

SANDBACH, in Cheshire, XIX. 596. SANDBY (Paul), painter, XIX. 596. Sandcrack, XXI 562. SANDEMANIANS, XIX. 596; X. 675. Sanderling, bird, XVI. 804.

Sanders, a brown dyestuff, VIII. 308. Sanderson (Robert), bishop, XIX. 596. Sandey, one of the Orkney islands, XVI. 718, 719.

Sandford (Sir D.), on Pindar's poems XVIII, 102.

Sandi, town in Oude, XVII. 18. Sandili, Kafrarian chief, XIII. 35.

### SAN—SAN

Sandius (Christopher), his Bibliotheca Antitrinitariorum, III 278

Sandiver, X 382 SANDOVAL (F Prudencio de), bishop and historian, XIX 597.

SANDRART (Joachim von), artist, XIX 597 Sandstone, XV 141, 155—varieties of, 142
—ripple marks on, 159—of the Permian period, 205—as a building stone, XX. 711—strength of, 717.

- red and mottled, XV 206-white, 1b -old red (see Devonian) Sandusky, town in United States, XIX 597; XVI 490.

- river, XVI 489.

SANDWICH, in Kent, XIX 597.

- ISLANDS, XIX. 598, XVIII 270-Cook's discovery of, VII 340—bread-fruit of, V 301—tides at, XVII 581 height of mountains, 645 - volcanoes XXI 604.

- (Lord), V 487 Sandworts, plants, III 521. 

Singa, in Japan, XIX. 599.

Sangala, taken by Alexander the Great XIII 770 SANGALLO, fam of architects, XIX 599, 600

SANGERHAUSEN, in Prussia, XIX. 600. SANGORA, in Siam, XIX. 600 Sangro, river, XII 638; XX. 238 Sanguification, XVII 661 Sanguine, in heialdiy, XI 324.

Sangumolaria, genus of mollusks, XV 350 Sanguisorbidæ, tribe of plants, V. 191 Sanguisuga, genus of annehides, XL 305. Sanguisuga, XIX. 600; XIL 768.

SANITARY SCIENCE, XIX 602—effect of registration on, XVIII 837—sanitary police, 196-circumstances affecting the health of individuals and communities, XIV. 440, 443—sanitary condution of the woollen and worsted districts, XXI 920-sanitary properties of tea, XX. 83 -ventilation, as a sanitary agent, XXL 539.

Sanjar, sultan, XVII 437. SANYAZARO (Jacopo), Italian poet, XIX. 622. 

Sans Souci, XVIII. 429.

Sansanding, in Western Africa, XIX. 624 SANSCRIT, XIX. 624—alphabet, II. 615literature, V. 270 — language, I. 204; XIII. 199, 206, 207, 228; XVII 519 study of, 529-grammars of, 527, 529mode of writing it, II. 611-its affinity to Greek, VI 365; to the Gothic, X 726-its prevalence in the languages of the Indian archipelago, III. 748 Sanseviera fibre, XXI 782.

Sanson (Mile.), magnetic experiments on,

- (NICOLAS), geographer, XIX. 624. Sansovino (Jacopo Tatti), XIX. 625—his merits as an architect, III. 452—his sculptures, XIX. 863.

SANTA ANNA, town in San Salvador, XIX. 625.

Australasian island, XVIII. 727 CATHARINA, in Biazil, XIX. 625. CRUZ, XIX. 625; VI. 163, 164, 166;

IV. 752-Nelson's attack on, XVI. 134.

— Cruz de la Sierra, in Bolivia, XIX. 625; IV. 821-population of, 828. - Fé de Bogota. Sec Bogota. - Fé, in La Plata, XIX. 625; XVII.

779. - Fr in New Mexico, XIX, 625; XIV.

MARTA, in New Granada, XIX. 625: X. 797-mountain chain, 795, 796. MAURA, one of the Ionian isles,

XIX. 626; XII. 452; XIII. 348. - Anna, president of Mexico, XIV. 712, 713, 714.

Cruz, president of the Bolivian republic, IV 837; XVII. 468, 469. Santalacese, nat. order of plants, V. 205.

# SAN—SAR

Santals, Indian race, XI 467. Santana (General Pedro), XI 258. SANTANDER, in Spain, XIX 626.
——— (General), IV 818, 819.

— (M de la Serna), on the origin of printing, IV 707, XVIII 526—on early printed books, IV 708 SANTAREM, town in Portugal, XIX. 626 SANTEUL (J. Baptiste de), XIX. 626 Santiago, island, XIX. 626

- DE CHILI, XIX. 627, VI 542, 544, 547-academies and schools of, 546

- DE COMPOSTELLA, XIX 627

DE CUBA, XIX 628, VII 567copper mines of, 566 DEL ESTERO, IN La Plata, XIX.

628; XVII 779. - in New Granada, X. 797 Santillana (Marques de). See Mendoza

(Inigo Lopez de) Santini (Prof ), on the planet Jupiter, IV 91 SANTON 1, town of Spain, XIX 628.

SANTORIN, Island, XIX. 628-wine of, XI 16

Santorini, his anatomical discoveries, II 764-tubercles of, III 50 SANTOS, town of Brazil, XIX. 628 SAO SEBASTIAO, town in Biazil, XIX 630 SAONE, river in France, XIX 628

HAUTE, in France, XIX 628 ET LOIRE, in France, XIX 629 Saoud, a Wahaby chief, III. 365. Sap of plants, circulation of, V. 110; XXI. -Coulomb on the circulation of,

VII 464—in trees, XXI. 267, 268.
Sap-vessels of plants, V. 111
Sap-wood, V. 81, XXI 267, 270—in fir timber, 275—should be removed from

the timbers of ships, 280. Sapajous, in zoology, XIV. 141, 143—brain of. III. 176.

Saperda, genus of insects, IX 146 Sapindacee, nat order of plants, V. 186. Sapodulla order of plants, V. 199. Saponite, mineral, XV. 84.

Sapor, or Shappur, king of Persia, XVII -his embassy to Constantinople, VII. 306 - his war with the Emperor Constantius, 307; with Julian, XIII, 17 Sapotaceæ, nat order of plants, V. 190. SAPPERS AND MINIERS, XIX 630, 1X. 823,

824; III 666. SAPPHIRE, XIX 630; XV, 87; XVII, 623 -in Burmah, V 779-ciystallisation of, VII. 563—specific gravity of, XII. 88—lenses of, XIV. 767—dichroism in, XVI.

- d'enux, XV. 88. Sapphirine, XV 87 Sappho, XIX, 630—character of the poetry

of, XVIII, 102,

Sapromyza, genus of insects, IX. 251. Sapucaia-nut, XVI. 395. Sapyga, genus of insects, IX. 195. Sapygites, family of Insects, IX. 195. Saraband, Spanish dance, XIX. 630. Sarabat, river, XI. 353.

Saracenic architecture, III. 447-in Spain, 449.

Saracens, Arabians, or Moors, XV 305destruction of theh power in Spain, II. 24—their wars with the Roman emperors, VII, 313 et seq.—their invasion of Europe checked by the Crusades, 536 -their invasion of France, X. 6; of Italy, XII. 643-their sway in Palestine, XVII. 196-literature, science, and art among, XV. 306-agriculture under, II. 251-their conquest of Spain, and history of their kingdoms there, XX 460, 465 -its condition under them, 466-their revolt there in the sixteenth century, 469. See Arabians, Moors.

SARAGOSSA, OF ZORAGOZA, in Spain, XIX. 630; III. 393—university of, XXL 492. SARAISE, in Russia, XIX. 631. SARAISE, in Russia, XIX. 631. SARAPUL, in Russia, XIX. 631. SARATOGA SPRINGS, XIX. 631—Burgoyne's

disaster at. V. 483. SARATOV, in Russia, XIX. 631, 632. Sarawax, in Borneo, XIX. 632; V. 48, 49
—Sir James Brooke's account of, 49.

# SAR-SAT

SARAWAN, in Beloochistan, XIX. 632. Sarcocarp, in botany, V 135 Sarcocol, gum-resin, V 205. Sarcolite, mineral, XV. 75 Sarcoplinga, genus of insects, IX 249 SARCOPHAGUS, XIX. 632—of Cecilia Me-tella, III. 473 Sarcoramphus, genus of buds, XVI 739 SARDANAPALUS, XIX. 632, III. 778; XVI.

272, 275. Sandani, pass of, XVII 420 Sandani, pass of, XVII 420 Sandanella, genus of fishes, XII 237. Sandanes, XII 236, IX. 763 — French

fishery of, X 264

fishery of, X 264
SARDINIA (Aingdom of), XIX. 632; XII.
653—army, III 655—inonarchy, AV.
414—newspapers, XVI. 203—rallway
statistics, XVIII 787—French trade
with, X 259—coms, XV 442, 444—
height of mountains in, XVII. 642 postal system, XVIII 424-navy, XX. 138 - attack of refugees on, 887 --weights and measures, XXI 813-uni-versities, 492-map of, XII Plate.

- (island), XIX. 632-physical aspect of, 634-divisions, provinces, population, 610—early history, 642—reduced by the Romans, VI 288—language, XIII. 213 -map of, XII. Plate

Sarpis, or Saides, in Asia Minor, XIX 645. SARDONIO LAUGHTLE, XIX. 645. SARDONYX, XIX. 645; VI. 67. SAREPIA, in Russia, XIX. 615. Sargus, genus of insects, IX. 237.

- genus of fishes, XII. 286, 287fossil, 344. SARL, or Saice, Persian town, XIX. 645.

Sarine, Swiss river, bridges over, X. 305. Sarkolemma, II. 822 Sarkolite, mineral, XV 73. SARLAT, in France, XIX 646.

SARMATIA, XIX 646. Sarmatian languages, XIII 215. Sarmatians, IX. 388—Constantius' war with the, VII 302, 306.

SARNO, town of Naples, XIX. 646. - river, XX. 238

Saropoda, genus of insects, IX. 100. SAROS-PATAK, town in Hungary, XIX.

Sarracenjacere, nat. order of plants, V. 182. SARREQUEMINES, town in France, XIX.

Sarrotherodon, genus of fishes, XII. 265. Sarsaparilla, XIX. 616, V. 199; III. 128.

- order of plants, V. 210. SARTHE, in France, XIX. 646. SARTI (Giuseppe), musiciau, XIX. 647. Sartine (M. de), X 38. SARTO (Andrea d'A. V.), painter, XIX. 647; XVII. 66

SARLM (Old), XIX. 648. SCHON, in India, XIX. 648. SCHOLAU, town in France, XIX. 648.

Sashas, in joinery, V. 752—giazing of, 756. Saskatchewan, river, XVII. 605. Sassanian dynasty, in Persia, XVII. 435— Sassanian colus, XVI 350.

SASSAUL, town in Sardinia, XIX. 648, 640. SASSERAM, town in India, XIX. 648. Sassoline, mineral, AV. 98. SATALIAH, Turkish town, XIX. 648.

Satan, prominence given to him by the Roman Catholics, III. 312. See Devil. Sataspes, voyage of, X. 461.

Satellites, of Jupiter, I. 607, 786; IV. 70, 73, 75, 108—of Saturn, 72, 74, 75, 92; I. 860—of Utanus, ib.; IV. 72, 75—of Neptune, I. 860—orbits of the satellites, IV. 7th. See the different planets. Satin-bird, XVI. 748.

Satin-spar, XV. 93. Satire, Roman, XVIII. 105. Sathists, the most eminent, compared, VIII. 205.

Satisfaction, for injuries, doctrine of, XIIL 277-Popish doctrines of AVIII. 836. SATORALLYA-USHELY, town in Hungary,

X1X. 648. SATTARA, in India, XIX. 648, 649. SATURDAY, XIX. 649-origin of the word, VL 75; L 458, n.

2 B

# SAT-SAV

SATURN, planet, XIX. 649, IV. 71, 92inequalities of, I. 815; III 812—periods of revolution, I. 816—ring of, IV 71 inner ring, 92-satellites of, 72, 74, 75; I. 860-variation in its orbit, IV. 107physical condition of its surface, 92discovery of the eighth satellite, ib-Herschel's observations on, L 840

Saturnaha, XIX 649. Saturnia, genus of insects, IX. 212. Saturninus, Gnostic, X. 688 - Roman tribune, XIX. 319. Saturnus, XIX 649 Satyriasis, XIV 532

SATIRS, XIX. 649, IV 848 Satyrus, genus of insects, IX. 208. Sauces, adulteration of, IX. 770.

Sauchy Burn, defeat of James III at, XIX 763. Sauer-kraut, X. 586 Saugor, in India, XIX. 649—Sepoy insur-rection at, XVI. 310. Saul, XIX 650; XII. 766.

- XVII 344 See Paul Saul-wood of India, XXI. 277.

Sauley (Mr F. de), his work on the in-sects of the Dead Sea, IX. 24. SAUMAREZ (James, Baron de), admiral,

XIX. 650 -his naval engagement off the coast of Spain, V 583 SAUMUR, town in France, XIX 650.

SAUNDERSON (D1 Nicholas), mathematician, XIX. 650, I. 713, n 4, IV 774, 780

Saurat, village in France, XIX. 651 Saureys, fish, XII. 244

Sauria, or Saurian reptiles, XIX. 21; XVII 631—number known, XIX. 51, n. —their bones, III 86 et seq —vocal organs, 102—odontology of, XVI. 433 fossil, XVII 140 See Lizards. Saurichthys, genus of fossil fishes, XIL 335

Saurida, genus of fishes, XII 248. SAURIN (Jacques), preacher, XIX. 651.

- (Joseph), geometrician, XIX. 652 -on the calculus, IX 676. Saurocephalus, genus of fossil fishes, XII

Saurodon, genus of fossil fishes, XII. 346 Sauroidei, family of fossil fishes, XII 335, 349; XVII, 126

Sauropsis, genus of fossil fishes, XII. 335; XVII. 126.

Sauropterygia, fossil reptiles, XVII. 143. Sauropus, fossil reptiles, XVII. 133. Sauroren, battle of, XXI 826.

Saurostomus, fossil fishes, XII. 336, XVII.

Sanruraceæ, nat. order of plants, V. 207. Saurus, genus of fishes, XII. 244, 248. Saury-pike, fish, XII. 264. Sausage poison, IX. 761.

SAUSSURE (H. Benedict de), XIX. 652-his investigation of plants, II. 373-his account of two albinos, 447-his ascent of Mont Blanc, 627; and observations on its height, IV 467-on the carbonic acid of the atmosphere, 182temperature of the air at different altitudes, VI. 780; and of the earth at different depths, 767-on the temperature of the Swiss lakes, 777-his cyanometer, VII. 606-electrical effects of thunder clouds experienced by, 39-on electricity, VIII. 531, 566, 571, 578his electrometer, 619--on evaporation, IX. 407—on the descent of glaciers, X. 637, 638—his hygrometer, XII. 186. - (H. F), his works on insects, IX.

Saussurite, mineral, XIL 669; XV. 71. Sauve-gardes, reptiles, XIX. 28
SAUVEUR (Joseph), mathematician, XIX.

SAVAGE (Mr) his printing ink, XVIIL 545 (Richard), poet, XIX. 653—his intimacy with Dr Johnson, XII. 796, his Life by, ib., 802-poetry of, XVIII 124-Pope's generosity to, 334, n.

Savages, if left to themselves incapable of civilization, I. 449, 450; VIII. 91; XIII 186-their supposed antidotes to snake poison, XVIII 134.

# SAV-SAX

SAVAII, island, XIX. 654; XVIII. 277 SAVAN DROOG, Indian hill-fort, XIX. 654; V. 541; XI 498

SAVANNAH, in Georgia, XIX. 654; X. 565 ---- river, VI 247, X. 565. Sayannahs, XVII. 609--in Guiana, XI 81

Savart (Felix), I 892-on the propagation of sound, ib -on musical notes, ib on the vibration of solids, ib -his experiments in hydraulics, XII 151. Savary (General), X. 130

(M), on electro-magnetism, VIII 532: XXI 638.

(NICOLAS), traveller, XIX 654 (Servington), his double image micrometer, XIV. 747.

SAVE, river, XIX. 654; XII 10 SAVERNE, town in France, XIX 654 Savery (Capt. Thomas), his steam-engine, XX. 574, 577; I 770.

Savi (Prof), on the cohabitation of the ant and grasshopper, III 264—on the myriapoda, XI. 747, 748-on birds, XVI 731, 760, 777, n. 4, 791

Savigliano, Italian city, XIX. 654. Savigny on the Capitularies, VL 220the Roman law, 748.

- (M), on the organs of the mouth in insects, IX. 30—on the arachnides, III, 371, 386—on the mollusca, XI. 331 -on the annelides, 293 et seq

SAVILE (George), Marquis of Halifax, XIX. 

(Henry), his disapprobation of the use of tea, XXI 89.

SAVINGS BANKS, XIX. 656—in Belgium, IV. 624—Ireland, XII 528—Lombardy, XIII 647 - London, 665-New York, XVI. 229-Paris, XVII 283.

SAVONA, Italian city, XIX 674, 640 SAVONAROLA (Girolamo), XIX 674; XIV.

Savoury, plant, V. 202. Savoy (duchy of), XIX. 675—climate, 633

—cultivation, 634—glaciers of, X. 633. — cabbage, XI 737. House of, XIX. 641

Savria (Marquis of), V. 465 Saw, XIX. 676—circular saw for farms, II 268-manufacture of surgical saws VII. 601-circular, for cutting iron, XII. 561, 574

Saw-dust, as manure, II. 406 -- as a decdonzer, and preserver of animal sub-

stances, XIX. 621. Saw-fish, XII. 223. See Pustis. Saw-files, IX, 183.

SAW-MILL, XIX. 678-at Chatham, VIII. 81-in Holland, XI 583.

Saw-wort, yellow dyestuff, VIII 297. SAWUNT WAREE, IN India, XIX. 678. Sawyer's work, V. 754

Sax, of Brussels, his wind instruments, XV. 742.

SAXE (Maurice, Count of), marshal, XIX 679; V. 459.

SAXE-ALTENBURG, XIX. 680. SAME-COBURG-GOTHA, XIX. 68L SAME-MEININGEN, XIX. 682 SAXE-WEIMAR-EISENACH, XIX 682.

692.

Saxicava, genus of mollusks, XV. 350fossil, XVII, 108.

Saxicola, genus of birds, XVI. 755 Saxifiagacese, nat. order of plants, V. 194
—region of the, 227; XVII. 627. SAXO, or Saxo Grammaticus, XIX. 683,

Saxon architecture in England, III 480bibles, IV. 702—heptarchy, VIII. 656
—language, XIII. 211—laws of frankpledge, XVIII. 191—roofs, XIX. 390.
— Reen, town in Transylvania, XX.

Saxon-blue, dyeing of, VIII 303. Saxon-green, dyeing of, VIII. 309, 310. Saxons, VIII 793—their conquest of England, V. 374, 381-settlement in Scotland, XIX. 743-coinage of the, VIL 70-Charlemagne's wars with, X. 7, 8, 9—naval affairs under the, XX. 119 SAXONY, XIX. 684—army of, III. 651—

# SAX-SCA

metallic produce of, XV. 248-silver mines of, 235-tin mines, 240-agriculture in, XVIII. 665, 666—the Reformation established in, 822-postal system, 424-ravaged by Tilly, XX. 849-wan with Chailes XII of Sweden, 854weights and measures, XXI 813-universities, 492-wool, 905, 906. SAXONY, Prussian province, XIX. 687

Saxton's magneto-electric machine, XXI.

SAY (Jean Baptiste), political economist, XIX. 687—on the value of money, XV. 420-on political economy, XVIII 254, 259, n 2 - (Thomas), his work on American

msects, IX. 17 Say's stereometer, XII 87 Saynite, mineral, XV 116. Scab and Scab-mange, in cattle and sheep,

XXI. 578 Scaffold, bricklayer's, V 733. Scala Nova, Turkish town, XIX 688. Scalambra, cape, XX. 245.

Scalaria, genus of mollusks, XV. 383 Scalding, death from, XIV. 431. Scalds, poets, XIX 689.

Scale, mathematical instrument, XIX, 688 -in music, ib.; XV. 706-in botany, V. 113, 124-scales of force, velocity, acceleration, time, &c., VIII. 352—scales of fishes, XII. 216, 217, 332, 333; XVII 123, 124, 127—dualling scales, VII. 782.

of the Trigonometrical Survey, XXI 332 et seq

Scale-stones, then use in sculpture, XIX. 868. Scalene triangle, X 507.

SCALIGER (Julius Cæsar), XIX. 688. - (Joseph Justus), XIX. 688; V. 254. n. 4: XVII 523-derives the Greek letters from the Phonician, II. 612—collection of anecdotes of, 737—his vanity and dogmatism, 738 - Julian period proposed by, VI. 81-his altercation with Scioppius, XIX. 735-on the squaring of the circle, XX. 521. Scalites, fossil mollusks, XVII. 110.

Scalloway, in Shetland, XX. 113 Scalops, genus of mammaha, XIV. 151-teeth of, XVI 450. Scalp, muscles of the, III. 39.

Scalpel XX 821. Scalpellum, fossils, XVII, 101, Scaly-lizard, XIV. 192 SCAMANDER, liver, XIX. 688, XXI 356,

357, 358 Scammony, plant, V 201 Scamozzi, architect, III. 452.

Scampirro, fish, XII. 293. SCANDERBEG, XIX. 688; IL. 736; XXI.

SCANDERCON, XIX. 688; II. 469. SCANDINAVIA, XIX. 688; XVI. 316; VII. 750-mythology of, XV. 767-romances of, XIX 264—reptiles of, 15—languages, XIII. 211 - Cambrian and Cambro-Silurian rocks of, XV. 196, 197-mountain system of, XVII. 595—heights of mountains, 642, 643—suicide in, XX.

SCANDINAVIAN LITERATURE, XIX. 689historical writers, XI 549

machine-press, XVIII 562
Scandinavians, XIX 688—in the Hebrides, XI. 279—origin of jury trial among the, XII. 22—discovery of America by the, XVIII. 163, n. 2.

Scania, plain of, XX 861. Scanno, lake, XX. 289. Scansoles, order of birds, XVI. 774. Scantlings of timber, XX. 780. Scape, in botany, V. 113. Scapement. See Escapement.

Scaphander, genus of mollusks, XV. 372. Scaphidites, tribe of insects, IX. 114 Scaphidium, genus of insects, IX. 114. Scaphites, extinct mollusks, XV. 394;

XVII. 118. Scaphold bone, III. 36. Scaphura, genus of insects, IX. 158. Scapolite, XV. 72.

# SCA—SCH

Scapula, III. 31-in the mammalia, 81in biids, 86—in reptiles, 88 - (JOHN), XIX. 702-his conduct to Henry Stephanus, XX. 680.

· (Ostorius), V 377. Scarabæides, family of insects, IX. 118 Scalabæus, genus of insects, IX 122 and n 2—Egyptian, 119, XI 388—sacred to Ptah and Rae, VIII 439. Scarba, whillpool of Coryvreckan near, VII 422,

SCARBOROUGH, XIX 702 - in Tobago, XXI 297. Scarbroite, mineral, XV. 84. Scarf-skin, II 834

Scarfing, in carpentry, V. 746; VI. 261,

Scarites, genus of insects, IX 85. Scantides, family of insects, IX. 85, 87 SCARLATTI (Alessandio), musician, XIX.

- (Domenico), musician, XIX 703 Scarlet, mode of dyeing wool, VIII 288; silk, 292, cotton, 295 —— FEVER, XIX. 704

SCARPA (Antonio), XIX. 704-his anatomical investigations, II. 767-on the structure of bone, 826-on the nerves, 806. 814—on the nerves of the nose, III. 43 -his surgical improvements, XX. 819.

SCARPANTO, Island, XIX 705. Scarphing, in ship-building, XVI. 97 SCARRON (Paul), XIX 705, XIV 100 Scarus, fish, XII. 266, 267-bones and teeth of, XVL 410, 420, 421, 422, 426 Scatharus, genus of fishes, XII 287.

Scatophaga, genus of insects, IX. 251. Scatophagus, genus of fishes, XII 301, 302 -fossil, 344

Scatopse, genus of insects, IX. 229. Scattery, island, VI. 754, 755. Scaurus, genus of insects, IX. 129. Scearston, battle of, VIII. 662. Sceattæ, Anglo-Saxon coin, VII. 70.

Sceaux, in France, XX. 34. Sceledosaurus, fossil reptiles, XVII. 150. Scenery, introduced upon the stage by Æschylus, VIII 134.\*

Scenopinii, family of insects, IX 244. Scenopinus, genus of insects, IX 244. Scepacez, nat order of plants, V 206 SCEPTICISM, XIX 706-Bishop Earle's decription of a sceptic, I. 51—Hume's, 209, 210; XII. 5, 6; XIV. 612—Glanvil on, X. 642-of Sextus Empiricus, XX. 67. SCEPTRE, XIX. 711.

SCHADOW (J. Gottfried), sculptor, XIX. 711. Schaeffer (J. C.), his works on insects.

Schafarik (Paul Joseph), on Sclavonic philology, XVII. 529 SCHAFFHAUSEN, XIX. 711; XX. 882-falls

of, XVII. 605.

OI, AVIL 000. SCHALMEN (Godfrey), painter, XIX. 712. SCHAMPI, VI 342, XIX. 507. SCHASSBURG, Austrian city, XIX. 712. SCHAUM (II.), his works on insects, IX.

SCHAUMBURG-LIPPE, XIX. 712; XIII 503. Schaw (Sir John), his improvement of Greenock, XI. 45.

Schaw's Hospital, XL 178.

Schazk, Russian town, XX. 94. Schezle (Charles William), XIX 712—his experiments on heat, I. 762; XI. 262 on the composition of the atmosphere, IV. 180-his chemical discoveries, 758on the effects of light on metallic solutions, XIII. 459.

Scheele's green, VI. 495; VIII. 819. Scheeletine, mineral, XV. 106. Scheelite, mineral, XV. 105.

SCHEEMAKER (Peter), Flemish sculptor, XIX. 713.

Scheererite, mineral, XV. 125. Scheffer (Ary), painter, XIX. 718; III. 719.

(JEAN), antiquary, XIX. 713. Schehallon, Scotch mountain, XVII. 454 -geology of, 456-height of, 643 and n. 2 Maskelyne's observations on the attraction of, I. 834; III. 807; XIV. 335. Schen (Everard), philologist, XIX. 714.

# SCH—SCH

Scheiks, in Arabia, III. 350, 351-among the Druses, VIII 199

SCHEINER (Christoph), XIX. 714-on the solar spots, III 801; IV. 25, 26, 28, XIV 742—on optics, XVI 531. Scheldt, river, XIX. 714, IV. 611, XI

581, XVII. 647-navigation of, X. 77. ESTADT, town in France, XIX. 714 Schellenberg (J R), his works on insects. TX. 11.

SCHELLING (F W. Joseph von), XIX. 714, XI 282—his system of philosophy, I 200, 201; XIV 607—on ancient mysteries, XV. 754-his pantheism, XVII. 237-Jacobi on, XII 668. Schemacha. See Shamaka.

Schemes of the Scotch Established Church,

XVIII 493.

Schemitz, in Hungary, XIX 716 Schenck's process of flax-retting, IL 332, IX 655, 656.

SCHENECTADY, town in New York, XIX. 716.

Scherer (General), X 111. SCHERZO, XIX 716

Scheubelius, his improvements in algebra, II 485

Scheuffelm (Hans Leonard), painter, XIX. 716

Scheutz's calculating engine, I. 881 SCHEVENINGEN, in Holland, XIX. 716.

Schiechs See Scheiks. SCHIEDAM, in Holland, XIX. 716—distilleries of gin at, VIII. 51. Schiel's prvot, XIV. 406

Schiffermuller, his work on insects, IX. 7

Schilbes, genus of fishes, XII 261. SCHILLER (J. C Frederick von), XIX. 716 —his plays, VIII. 167—poetry, XVIII.

119—his ballad of the Fight with the Dragon, 108-novels, XIX. 293.

Schillerspar, XV. 79 SCHINKEL (Karl Filedrich), architect, XIX.

SCHINZNACH, in Switzerland, XIX 722. Scuro, in Austrian Italy, XIX. 722. Schiodte (J. C.), his work on msects, IX.

Schirach on bees, IV. 571. SCHISM, XIX. 722.

Schisopyge, genus of fishes, XII. 257. Schisothorax, genus of fishes, XII. 257. Schist, XV. 154. See Slate.

Schizandraceæ, nat. order of plants, V 181. Schizaster, fossil echinoidia, XVII. 100 SCHLAN, town in Bohemia, XIX. 722. SCHLAWE, town in Prussia, XIX. 722.

Schlegel (A. Wilhelm von), XIX 722—on the study of Sanscrit, XVII. 529—his acquaintance with M de Staël, XX. 526. - (F. C. Wilhelm von), XIX. 723writings of, I. 214, n. 2-on the tragedies of Euripides, VIII. 138; IX. 379-on French comedy, 156—on the German drama, 167—on the Indians, XVII 527 -on poetry, XVIII. 103, 104 et seg.

- his work on serpents, XIX. 16, n 2 -partial translation of, by Professor Traill, ib .- on ophidians, 40 and n. 1on serpents, 42, 47 et seq.-his arrangement of serpents, 71-on the serpents

of Amboyna, II. 661. Schleiden (J. M.), on the cytoblast, II. 783; V. 67—on the cells of plants, 68 on humus, II. 377-on plants, V. 73 et

seq. on the structure and physiology of plants, V. 67 et seq.

Schleibrmacher (F. D. E.), theologist, XIX 725; XVIL 525—on our dependence on the Deity, XIV. 620, n. 2; 621, n. 2—on theology, XXI. 181, 189 et seq. SCHLETTZ, XIX. 727.

Schlerodermi, family of fossil fishes, XII.

Schleswig, in Denmark, XIX. 727. or Sleswick (duchy of), XIX. 727, VII. 745, 746.

Schligmann on birds, XVI. 729. SCHLÖZER (A. Ludwig von), historian, XIX. 727.

SCHLUSSELBURG, in Russia, XIX. 727. SCHWALKALDEN, XIX. 727.

# SCH-SCH

Schmidt-Gobel (H. M.), his work on insects, IX, 23, Schmitz, on the figure of the earth, IX

- (H D), his weighing-table, XXI 798

(Dr Leonhard), his edition of Niebuhr's Lectures, XVI 260—his translation of Zumpt's Latin Grammai, XXI 1010

SCHMOLLN, XIX. 727. SCHMOLNITZ, in Hungary, XIX 727. SCHNEEBERG, in Saxony, XIX. 727 SCHNEIDEMUHL, Prussian town, XIX 728 Schneider (G T.), his work on insects,

- (JOHANN GOTTLOB), XVL 728 his Greek Lexicon, XVII 526. Schneiderian membrane, III 42 Schnitzler (M.), on the forests of Russia, XIX. 519

Schnore von Karolsfeld (Julius), painter, XIX. 728 SCHNURRER (C Friedrich), XIX 729.

Schoeffer on birds, XVI. 729. Schoen (Martin), engraver, VIII. 800. Schoenbrunn, palace of, XXI 585 Schoenherr (C J), his works on insects, IX 12

SCHOFFER (Peter), early printer, XIX 728, XVIII 528, 529, XXI 400. Scholars at Oxford, XXI 456. Scholarships, in universities, XXL 472,

490. Scholastic Ethics, I 323 et seg Scholast, XIX. 728—scholiastics, VIII

90 Scholium, X. 508.

Scholz (J. M. August), philologist, XIX.
728—on the text of the New Testament. 836.

Schomberg, clipper sailing-ship, XX. 164,

- (F A), Duke of, XIX. 728-Itish campuigns, V. 442, XII 489. —— town in Austria, XIX 729.

(Uldaric), a blind scholar, IV 779 Schomburgk, his discovery of the Victoria regia, XI 82

Schonbein's method of making gun-cotton XI. 94

SCHÜNEBECK, town in Prussia, XIX, 729. Schoner (Andrew), his work on dialling,

- (John), on dialling, VII. 775. SCHUNHAIDE, town in Saxony, XIX 729. SCHÜNLINDE, town in Boliemia, XIX. 729. Schoolmasters, diseases of, XIV. 442— their salaries, XIX. 801, 802

Schoolmen, their perversion of Aristotle's philosophy, III. 551.

Schools, XIX. 729; XXI. 444—infant and adult, IV. 618-parochial, XVIII. 491of the Free Church, 495 - principal English, VIII. 745—collegiate and grummar in England, ib.—number in England, 746-supported by religious bodies in England, ib .- day, Sunday, and evening, for adults, in England, 747; in Britain, XV. 824-receiving grants from Government, ib.; XIX. 802—normal schools, XV. 827; in Glasgow, X. 653; in Scotland, XIX. 802—as affecting health, XIV. 444—Bell's schools, XV. 822-in Ireland, XII. 533, 534gium, IV. 617—Bengal, 652—Scotland, XIX, 802, 803. See the different countries; also National Education, Univer-

- medical, in the United Kingdom, XIV 463-of Edinburgh, XXI. 484-in United States, 493.

mining, XV. 247; XXI. 323. of Art, in Leeds, XIIL 314. of design. See Design, schools of. of law and theology, in United

States, XXI. 494.

OF MUSIC, XIX. 729. See Conservatory, Mattel, Martini.

- Sunday. See Sunday Schools. - trade, XXI. 321.

SCHOOTEN (Francis), mathematician, XIX. 729—on amicable numbers, IL 716.

# SCH-SCI

Schorl, XI 89.

Schorlamite, mineral, XV 110. SCHOTT (Andrew), Jesuit, XIX 727

- (Gasper), on aeronautics, II 167on the coldness of the moon's rays, VII 766

(Dr William), XVII 535-Klaproth's exposure of his pretended translation of Confucius, XIII 105-on the text of the New Testament, XIX. 836 Schouten, his visit to Papua, IV. 265, and New Britain, 264.

Schouw (Prof), on the distribution of plants, V. 223—on the flora of Britain. 231-his phyto-geographic regions, 227, XVII 627.

Schouwen, island in Zealand, XXI 968 Schrank (F. de P), his work on insects, IX. 7

Schreger on the lymphatics, II, 805. Schreibers (C), his works on insects, IX 13. Schrevelius (Cornelius), Dutch lexico-grapher, XIX. 730.

Schroeter on the moon's atmosphere, IV 44-on Mercury, 65; Venus, ib., Ceres, 68; Pallas, 1b, Jupiter, 69, 71. Schrotterite, mineral, XV 83.

Schubert on the fertility of Palestine, XVII. 190

Schubler (Frof), on the physical characters of soils, II. 297—on atmospheric electricity, VIII 579. Schuiskoy, XIX. 475.

Schuja, town in Russia, XIX. 730 Schulenburg, or Schullemberg (Count), XII. 456 and n 2—his campaign against the Swedes, XX 853—skilful retreat, 854—defeated by Renschild, ib. SCHULTENS (Albert), XIX. 730.

- (Henri Albert), XIX 730 SCHULTZE (E. C. Friedrich), German poet, XIX. 730

Schulz (Dr David), his edition of the New Testament, XIX. 837. Schulze on logic, XIII. 581, n. Schumacher (II Christian), astronomer,

XIX.730-his astronomical publications, III. 814. SCHUYLKILL, river, XVII 395, 508, 510.

- Canal, XVII. 397. SCHWABACH, town in Bavaria, XIX. 730.

Schwann (Dr), on the cytoblast in animal tissues, II. 783—on the development of animals and plants, XVI 408-on the teeth 409.

SCHWANTHALER (L. Michael), sculptor, Schwartz (Barthold), XI 150; IIL 581, n.

636. Schwartze (M. G.), on the Coptic language,

XVII. 534. Schwarz (C. Friedrich), missionary, XIX.

731. Schwarzburg, in Germany, XIX. 732. Schwaz, town in Austria, XIX 732. Schwedt, town in Prussia, XIX. 732. Schwegler on the Pelasgi, XVII. 370, 371

-on Niebuhr's theory respecting the sources of early Roman history, XIX

Schweidnitz, town in Phussia, XIX. 732 Schweigger's electrical multiplier, I. 976; VIII. 616; XXI 641

Schweinfurt, town in Bavaria, XIX. 733. Schweitzer (Dr), his analysis of sea water. XIX, 585.

SCHWELM, town in Prussia, XIX, 733. Schwenkfeld on ornithology, XVI. 725. Schweran, instrument, VIII. 270. Schwerd (F. M.), on optics, XVI. 613. Schwerin, German town, XIX. 733. Prussian town, XIX. 733.

- Field-Marshal, XVIII, 652, 653. Schweynheym, early printer, XVIII. 532. Schwiebus, town in Prussia, XIX. 733. SCHWITS, Swiss canton, XIX. 723-town,

ib.—statistics of, XX, 882. Sciacoa, town in Sielly, XIX, 783. Sciadephorus, genus of mollusks, XV. 400. Sciades, genus of fishes, XII. 262. Sciæna, genus of fishes, XII. 285. Scientide, family of fishes, XII. 284, 285. Sciara, genus of insects, IX. 229.

# SCI-SCO

Sciatica, XIX. 142. Sciell, town in Sielly, XIX 734 SCIENCE, XIX. 734—classification of the sciences by Bacon, d'Alembert, and Locke, I 1-8-dissertations on mathematical and physical, 549, 575, 799-experimental, introduced into England, IV. 452-mixture of, with poetry, XVIII 108—science and art, XIX 107, I 805—in Egypt, VIII 442, 447—medical, MIV 449—application of, to ship-building, XX 140—academies of, 11 62—in the United States, XXI 424.

Scienoidei, family of fossil fishes, XII 344. SCILLY ISLANDS, XIX. 734-Sir Cloudesley Shovel wrecked on the, V. 449; XX.

Scincidæ, family of reptiles, XIX 38. Scincus, genus of reptiles, XIX 38. Scinde, XIX. 734. See Sindh Scindin, Indian chief, XXI 819. Scink, reptile, XIX. 28, 38. Scio, island, XIX 734—massacre of, in 1823, XI 26—ancient coins of, XVI 376

-wine of, XXI 886 Sciomyza, genus of insects, IX 254

Scion, in grafting, V. 168; XI. 703 Scioppius (Gaspai), XIX, 705 Scioto, river, XVI 489 Scipio, Roman family, XIX 735.

(Africanus Major), XIX 735, 311, 314—assisted by Masinissa, XIV 334 his war with the Carthaginians, VI 298 -his operations against Hannibal, XI.

(ÆMILIANUS AFRICANUS MINOR), XIX. 737, 307, 318—his operations against the Carlhaginians, VI. 301—Carthago destroyed by, 303; XIX. 314—Numantia taken by, XVI. 350; XX. 458.

Scinhus of the stomach in the horse, XXI 568

Scissurella, fossil mollusks, XVII. 111. Scitaminem, nat order of plants, V. 211. Sciuridm, family of mainmalia, XVII. 632. Sciurus, genus of mammalia, XIV 178. SCIAVONIA, XIX. 737. See Slavonia. Sclavonian Bibles, IV. 701, 702; XIX. 840. Sciavonians, IV. 318. See Slavonians. Sclavonic language, XIII 214, IX 391-contact of the Arian and Semilic families to be found in, XVII, 535.

- philology, XVII. 529. Seleranthacea, nat. order of plants, V. 204. Seleradermids, fishes, XII. 312 Scleroderms, fossil fishes, All 351. Sclerogenide, family of fishes, XII. 281. Sclerognathus, genus of fishes, XII 258. Sclerotic membrane, III. 43, 95; XIII.

Scolds, punishment of, VI. 322. Scolex, entozoa, XXI. 979. Scolexerose, mineral, XV. 71.
Scolexite, mineral, XV. 75—pyro-electricity
of, VIII. 500. Scolia, genus of insects, IX. 195.

Scolietes, family of insects, IX. 195. Scollodon, sub-genus of fishes, XII. 323. Scolostoma, fossil molluska, XVII. 110 Scoloker (Anthony), printer, XXI. 401. Scolopax, genus of birds, XVI. 802. Scolopendra, genus of myriapods, AV. 749. Scolopsides, genus of fishes, All, 278. Scolytus, genus of insects, IX. 142. Scomber, genus of fishes, XII. 296. Scomberesocide, family of fishes, XII, 264. Scomberesox, genus of fishes, XII. 264. Scomberidae, family of fishes, XII. 292, 296, 293, 331-fossil, 345,

Scove, village in Perthshire, XIX. 737. Scoras, sculptor, XIX. 737, 857. Scopelidæ, family of fishes, XII. 248. Scopelus, genus of fishes, XII. 248. Scopia. See Uskup. Scopoli on birds, XVI. 729-his work on

insects, IX. 5. Scops, genus of birds, XVI. 746. Scopus, genus of birds, X.VI. 800. SCORE, in music, XIX. 738. See Partition.

Scoresby (William, J.D.), XIX. 738-on the magnetic effects of electricity, VIII. 600—on the temperature of the

### SCO-SCO

Arctic regions, VI 770—on the height of waves, XI. 216—his artificial magnets, XIV 71—his magnetometer, 82—on the walrus, 173-on Greenland, XI. 40, 41 -on medusæ, XXI 997.

Scoresby Sound. XI 41. Scorodite, mineral, XV. 102

Scorpænæ, genus of fishes, XII 280,

Scorpio, genus of arachnides, III. 385. Scorpion's Heart, star, III 267. Scorpions, III 384, VIII 433; XVII 637 -fossil, 103.

Scorpis, genus of fishes, XII 302 Scot zonera, XI. 740 Scot (Alexander), IX. 322 n 2.

(Dr), of Corstorphine, on domestic

poultry, XVI. 789

— (Rightald), XIX. 740—on the heathenism of the Church of Rome, III. 311, n. 2.

and lot, XV 683 Scotch elm, XVII 758 Guards, XI 74.

pure, XVII. 756-timber of, XXI 275.

- snuff, XXI. 295, 297. Scoters, birds, XVI 816.

Scoti, VI, 74.

Scotia, in architecture, III. 512 - Ireland originally so named, VII. 722

Scotichronicon, IX. 777, 778.

Scotinus, genus of insects, IX. 130. Scotists. See Duns (John)

SCOTLAND, XIX 741-history of, ib -statistics of, 790—reasons why no great writer appeared there in the age of Locke, I 105-metaphysical and moral philosophers of, 220 et seq, 284, 427 (see Hume, Reid, Stewart, &c.)-mathematical and physical science in, 807 et seq (see Leslie, Watt, Robison, Black, &c) -agriculture, II 254, 258, 261, 263 et seq, VIII. 725—Agricultural Chemical Association, II. 265, 374—agricultural societies, 265; VIII. 398 - Antoninus' wall, III. 281, V. 379 — archbishops formerly in, 423—archery, 425, 428—bagpipe, IV. 365—Covenanters, 371, V. 395, 428 et seq.; VII. 469-bankruptcy system, IV. 417--rearing of bees recommended, 587—introduction of bleaching, 758-ale-brewing, V. 326, 334-royal burghs, 54-ancient population of, 375 -union of the crowns of England and, 381, XXL 418-attempt of James VI. to establish Episcopacy, V 383-similar attempt by Charles I, 394-civil war with him, 395-his visit in 1641, 398-Solemn League and Covenant, 404; VII. 469—invaded by Cromwell, V. 414 tyrannized over by Charles II, 428, 432 -submission to William the Third, 440 -battle of Killikrankie, 441-massacre of Glencoe, 443—colony on the Isthmus of Darien, 444 (see Darien) — union with England, 449-attempt to dissolve the union, 452—rebellions in 1715 and 1745, 453, 460—subsequent measures for tranquillizing the Highlands, 462plication of the Catholics for relief, 490 -Act for the restoration of forfeited estates, 514 complaint of grievances by the royal burghs in 1791, 541—Act for the relief of the Catholics, 549 prosecution of Muir and Palmer in 1798. 550-Acts of Parliament in 1810, respecting ministers' stipends and the Court of Session, 608—resistance to the abolition of small notes, 644—Reform Bill, 661, 663-disruption of the Estabhshed Church, 669—Buchanan's History of, 719—castles, VI. 327—Chalmers' Caledonia, 402—assassination common in the sixteenth century, 626-Lord High Constable, VII. 299—corn-laws, 378 —coronach, 412—cotton-manufacture, 445 et seq.; X. 650, XIV. 285—Lord Hailes' Annals of, VII. 634—Defoe's mission to, 696—deaf and dumb, 686, 687—distillation, VIII 47, 48, 51, 52 law of divorce, 67, 72-early drama, 144

### SCO-SCO

-George IV.'s visit to, 393-emigration from the Highlands, 651-Edward the First's attempts to subjugate, 681-extent of, 715-language, 797-Episcopacy, IX. 182—fisheries, 603 et seq, 635—vitrified forts, 790—glass-making, X. 659 -Presbytemanism, XI 492, XVIII 489 -horses, XI 662-clown of, 335-royal arms of, 323-form of marriage in, XIL 51-form of infeftment in, 379-jury trial, 23, 24 - insurance-offices, 407 highways, 433; XXI. 43—irrigation, XII 619—iron manufacture, 574 leases, XIII. 304-leptosy formerly in, leases, XIII. 302—reprosy normeny m, 340—hibraries, 400—law of hibel, 358—free-masonry, XIV 338—proportion of msane, 536—geology, XV. 197 et seq—banks and banking, 463—education, 835 militia, 8 — money, 435, 440, XVI 388 — monarchy, XV 414 — municipal system, 685—inland navigation, XVI 55, 58-newspapers, 184 et seg., 192notaries in, 336 - school of painting, XVII 80-parhament, 290-representative peers, 293-franchise, 294-mountains, 595, heights of, 643 — police, XVIII 203—early printing, 538—registration, 840 - marriages, births, and deaths, 841-pusons, 570-convicts, 585 -railway statistics, 786, 787 et seqpost-office, 403 et seq -- Reformation. 880—regalia, 1b —Robertson's History of, XIX. 230 — savings-banks, 659 — slavery, XX. 321—Steuart's History of, 783-increase of spirit duties in, XXI 73-quantity of spirits charged with consumption duties, 74—Trigonometrical survey of, 332 et seq—universities, 472—measures, III 584; XXI 805—weights, 806-wool, 907-map of, XIX. Plates See Britain, Highlands, and the names of counties and towns; also the Chronological Table, VI. 683 ct seq. Scotobius, genus of insects, IX 129

Scots, VI 74—their wars with the Romans, 380—in Ireland, XIX. 742—form a settlement in Kentire, 743—their invasions of Ircland, XII. 470, 472—Scotch settlers

in Ulster, 479 See Scotland. Scott (C. H), his work on the Danes and Swedes, XX 865.

(DAVID), painter, XIX 812-his picture of Vasco da Gama, X. 393 (General), Mexico taken by, XIV

(JOHN, BARON ELDON), chancellor, XIX, 813.

(J. Corse), on the dentition of the elephant, III 106, XVI. 474, 475

(MICHAEL), wizard, XIX. 817.

(THOMAS), divine, XIX 818. (Sir Walter), XIX 818—on the spectre that appeared to Brutus, III 210, n. 3-on apparations, 318, 320, 321 -his connection with Mr Constable, VII. 299-sum of money received for his works, 356-his article on the drama, in this work, VIII 137, n-his monument in Edinburgh, 406—on licensing plays, IX. 539, n 1—his intimacy with Hogg, the Ettrick Shepherd, XI, 557letter from Hogg to, 558, n.—his mind pre-eminently of a historical cast, 546, 548—Lockhart's Life of, XIII. 548—Leyden's assistance to, 854—his attention to the minute peculiarities of nature, XVIII. 94—poetry of, 125—as a novelest, XIX. 280—on the character of Swift's Examiner, XVI. 183-on Joanna Baillie, IV. 369-on the works of Fielding, IX. 539, 540, 541, Richardson, Mig. 1A. 555, 540, 541, Richardson, XIX. 272; Sterne, 274; Mackenzie, 275; Walpole, 276; Charlotte Smith, 279, Maturin, 277; Le Sage, 288-imitators of, 281-an occasional contributor to the Edinburgh Review, 820—his intercourse with Southey, XX. 455-his notices of Swift, 874, 875-his blography of Swift, 878-his notice of Professor Wilson XXL 876-Wilkie's picture of him and his family, 867.

(WILLIAM, LORD STOWELL), XIX 825—on collisions at sea, VII. 181—on

# SCO-SCY

the law of divorce, VIII. 71-on the marriage laws, XII 51 et seq. Scotus (Marianus), his story of Pope Joan, XII 714 See Duns Scotus

See Engena SCOUGAL (Henry), XIX. 826. Scoular's grubber, II 272 Scouring of wool, IV 769; VIII 275; XXI 921-silk, IV. 770, VIII. 276-cotton,

of harbours, XL 223-of rivers, XVI 73.

Sciafton (Luke), on the practice of burying money in India, XVIII. 471. Scrain's hive, III 295 Scraper, engraver's, VIII 803

Screamer, bird, XVI. 807. Screeds, in plastering, V. 743
Screw, XIX. 827, XIV 397—screw-like motion, 389—differential screw, 401

- propeller, introduction of, XX 137, -definition of, 657-patch of the

screw, 1b., 659—slip of, 1b, 657—action of, 1b — different forms, 658, 659 paddle-wheels so far superseded by, 640 -its ments compared with those of the paddle-wheels, 661-screw-engines, 642 et seg.-house-power of, nominal and indicated, 644-spare gear for, 667

- steam-ships, in loyal navy, XVI. 95, XX 137, 670.

Sciew-piles, XX 753 Sciew-pine, V 77—oider of plants, 214. Scribbling of wool, XXI. 922. SCRIBE, XIX. 827

Scribing, in joinery, V 751. SCRIMZEOR, or Scrimgcour (Henry), XIX

SCEPTURE (HOLT), XIX. 828 See Bible, Old and New Testament, Vol I Dissen-tation III, Pentateuch, Moscs, Joshua, Paul, Peter, &c.

Scrobicularia, genus of mollusks, XV. 350 Scrobodus, genus of fossil fishes, XII

SCROFULA, XIX. 842, IX. 421.

Scioll, in architectuie, III. 512—in joinery, XII 814—in heraldry, XI, 338 Scrope (William), on deer-stalking, XX 212.

Scrophulanacea, nat order of plants, V. 202.

Sciotum, its anatomy, III 69 Scupini (Georges de), XIX 842 - (Madelfine de), XIX. 842. Scudo, coin, XV. 443.

Sculptor, a blind one, IV 781. Sculpture, XIX 843-Chinese, VI 582 -Egyptian, XVII. 47-Danish, XIX 696-Swedish, 702-casting in, VI. 323; of bronze statues, V 676-foundry of statues, IX. 843-Elgin marbles, VIII. 632-in the Crystal Palace, Sydenham,

XX. 892 — value of photography to, XVII. 553. See Statues. Scultetus on surgery, XX. 818. Scuppernong grape, XXI. 888 Scuppers of a ship, XIX. 869 Scurf, in cattle and sheep, XXI 578.
Scurevy, XIX. 869—chemical theory of,
VIII. 24—cured by the use of citric acid, XVI. 106-Capt. Cook's success in

curing, VII. 841. SCUTARI, XIX. 869; VII. 301-hospital at, during the Russian war, 506 and nbarracks at. XXI. 371.

- town in Albania, XIX. 869. Scutcher, VII. 443.

Scutching of flax, XIII. 494-silk, XX. 288

Scutella, fossil echinoidea, XVII. 99, 100. Scutellera, genus of insects, IX. 161. Scutellina, fossil echinoidea, XVII. 100. Scutibranchiata, order of mollusks, XV.

Scutigera, genus of myriapods, XV. 749. SCUTTLES in a ship, XIX. 869. Scydmænus, genus of insects, IX. 113. Scylax of Caryades, X. 467. Scylla, town of Naples, XIX. 869; XX.

### SCY—SEA

SCYLLA and CHARYBDIS, XIX. 869; XX. 241, 244 Scyllæa, genus of mollusks, XV 371.

Scyllarus, genus of ciustacea, VII 541 Scyllidæ, family of fishes, XII 321, 323. Scylliodus, genus of fossil fishes, XII. 342

Scyllis, ancient sculptor, XIX 853 Scyllium, genus of fishes, XII 323 Scymnidæ, family of fishes, XII 325. Scymnus, genus of fishes, XIL 325
—— of Chio, X. 467

Scyphia, fossil sponges, XVII 92, 93 Scyris, genus of fishes, XII 297. SCYROS, Island, XIX. 869. Scyrtes, genus of insects, IX 107. Scytalophis, genus of fishes, XII 233.

SCYTHE, XIX 869-reaping with the, II. 313-Hainault scythe, 1b.

SCYTHIA, XIX. 869 Scythian bow, V 251 Scythians, II 776; IX 388—their inva-

sions of the Eastern empire, VII 317. Scythiops, genus of birds, XVI 778 Scytodes, genus of arachnides, III. 380 Sea, X. 483-influence of the sun's rays

on, VI 777-temperature at different depths, ab; XIV. 644; XVII. 577—freezing of, VII 100—currents in, 593; VI 772, XVII. 577; XVIII 176—einbankments against, VIII 643—seas of Europe, IX. 385-right of all nations to the use of, XIII 284-high and narrow seas, 285-luminousness or phosphotescence of, 458; XVII. 574-its influence on climate and health, XIV. 444-water of, XV. 38; XVII. 572, XIX 585-its effects on rocks, XV. 139 -extent, mean depth, entire content and mass of, XVII. 572-specific gravity of the water of, ib.; XII. 89-colour of, XVII, 574—depth and form of the bottom, 574—subdivisions of, 576 proximity of volcanoes to the sea, XXI 604; cause of this, 606, ancient volcanoes remote from the, ib. See Ocean, Baltic, Mediterranean, &c., Tides, Waves, &c.

Sea-air-contains no munatic acid, IX. 415

Sea-apprentices, XIV. 349. Sea-bear, XIV. 173. Sca-brecze, III 737; XIV. 649. Sca-cat, fish, XII 309. Sca-fox, fish, XII. 322. Sca-haie, XV. 372. 

Sca-jellies, zoophytes, XXI. 995. Sca-kale, culture of, XI 742. Sea-lights. See Lighthouses. Sea-lion, XIV. 172. Sea-lochs. See Flords. Sea-pens, polypes, XXI 1003. Sea-pink, V. 203; XI. 748. Sea-scurvy, XVI. 105.

Sca-serpents, XVII. 634; XIX. 65. Sea-unicorn, XIV. 229. Sca-urchins. See Echinodermata. Sea-walls, VIII. 645.

Sea-weed, order of plants, V. 217-as manuie, II. 802, 406-analysis of, 406. Sec Algæ, Fuci. Sea-wolf, fish, XII. 309. Sea-worthiness, in insurance, XII. 420.

Seal, on ancient diplomas, VIII. 42-arms on seals, XI. 322.

in zoology, XIV. 171—dentition of, XVI 462, 463—skins and fur of, X. 348 —oil from, XVI 493—in the Casplan, Black Sea, and Aral, VI 311.

Scaling-wax, XXI, 779.

SEAMANSHIP, XX. 1-ballast, IV. 397. See Navigation, Navy, Sailing.

Seamon. See Sailors. Search, right of, XVI. 159; XIII. 288. Seasoning of timber, VIII. 209; XX. 168,

easoning of timber.
169, 170. See Timber.
easons, cause of the, IV. 11—variation in
length, 17—temperature of, supposed to
be influenced by the golar spots, 30, 88

SEA-SEE -Egyptian, VIII 449-in Hindustan, XI 450. Seat, in riding, XI 675, 677 - seats, in landscape gardening, XVII 773. Seaton (Sir Christopher), VIII 239. Seb, Egyptian deity, VIII. 437. Seba (Albert), his Thesaurus, containing figures of insects and buds, IX. 4; XVI. Sebaceous glands, II 833, 834. Sebak, Egyptian deity, VIII. 437. Sebastes, genus of fishes, XII. 220, 283. SEBASTIAN (Dom), XX. 29; XVIII 383, SEBASTIANO, Venetian painter, XX 29 SEBASTOPOL, of Sevastopol, XX 29; II 435; IV 743, VII 505—harbour of, IV. 744—stege of, IX. 815, 826, 827; XIX. 504, XXI 375-bombaldments of, 1b , XIX. 508, 509-capture of, 510 Seben, Egyptian deity, VIII 439
Sebenico, town in Dalmatia, XX. 29. Sebesten, order of plants, V. 201. Sebha, town in Fezzan, IX 528 Sebiz (Melchior), on medical jurisprudence, XIV 423 Sebonde See Raymond of Sebonde. Seboo, river, XV 594 SE-CHUEN, province of China, XX 29. Secale cornutum, a poison, XIV. 439. See Ergot of Rye. SECANT, XX. 29; XXI 838. Secchi (Prof.), his experiments on the sun's heat, IV 88—on the moon's surface, 89-his micrometer, XIV 753. SECEDERS, XX. 29; XVIII. 493, 498 SECKENDORF (Veit Ludwig von), XX. 30. SECKER (Thomas), archbishop of Canterbury, XX. 30. Second-sight, III 318. Secondaries in astronomy, IV 2. Secondary epoch, in geology, XV. 195, 205—10cks, XVII 588—couls belonging to, 97—in Spain, XX 485. - qualities of body, XIV 570 Seconds, in the graduation of the quadrant, XXI. 339. Secretary, bird, XVI. 745; II. 218. Secretary-at-war, British, III 663.
Secretion, XVII. 664—secreting cells, 650
—anatomy of the organs of, in man,
III 67—in brutes, 118—of plants, V 72, 73, 75; influence of leaves on, 106. Secretiveness, XVII 562, 673. SECT. XX. 30 — sects of Mohammedans. XV. 305-places of worship of the different sects in Scotland, XIX. 801. Section, in architecture, III. 512-in geometry, (see Conic Sections, &c.)-mode of tracing vertical sections, in physical geography, IV. 468 Sectional method of teaching, XV 828. SECTOR, XX. 30-astronomical or equatorial, ib .- zenith, ib .- Ramsden's, XXI. 335; Airey's, ib .- of a circle, X. 513. Sectoral barometer, IV 455. Secular equations, table of, IV 121. SECONDERABAD, town in India, XX. 30. SECUNDUS (Joannes Nicolaius), Dutch poet, XX. 31. Securifera, family of insects, IX 183. SECUTORES, gladiators, AX 31. Sfdan, town in France, XX. 31 Sedan-chairs, first introduction of, into England, II. 658. SEDBERGH, town in Yorkshire, XX 31. Sedge, order of plants, V. 215. SEDGEFIELD, town in Durham, XX. 31. Sedgemore, battle of, V. 435; XX 411. Sedgemore, measurement of a trigono-metrical base on, XXI 331. SEJANT, in heraldry, XX 36; XI 333. SEJANUS (Lucius Ælius), XX 36; XIX. Sedgwick (Prof.), on English boulders, Sejour on the moon's atmosphere, IV. 44. VII. 728-on joints in rocks, XV. 164-Selache, genus of fishes, XIL 322, 323, 324 on cleavage, 170-on the silurian rocks of Wales, 197—on the rocks of the Permian period, 205—on the geology of Selaginacese, nat. order of plants, V. 202. Selago, plant esteemed by the Druids, VIII. 188. Westmoreland, XXI. 841. SEDITION, XX. 31. SELBY, town in Yorkshire, XX. 37. SEDLEY (Sir Charles), XX. 22. Sedulius, XII. 465, 466. Seebeck (Dr A), on optics, XVI 543, 686. SELDEN (John), XX. 37—his Table-Talk, II. 740—his work on the Parian Chro-(Dr Thomas), I. 916 — thermo-electricity discovered by, ib., 976; VIII.

SEE-SEL 532; XXI 649-on the polarising structure in heated glass, I 912—on the prismatic spectrum, 954; XIII 452, XVI 593—on chromatics, VI. 643, 657 on magnetism, XIV 10, 27, 30—on optics, XVI 540, 543, 549 et seq.—on polarisation in fluids, I 910-on electromagnetism, XXI. 638-his electrical discoveries, 649 et seg Seed-lac, XIII 141. Seed-oil, XVI 494 Seed-pearl, XVII. 356, 357. Seed-vessel, V 136 Seedlings, XVII 769. Seeds of plants, V 139-transformations in, 142 - modes in which they are scattered, 162-physiology of, 161vitality of, 163-of agricultural crops, II 336—seed-wheat, 306—propagation by, IX 693, 702, XVII 767—of the pine and fir tribe, 767—leguminous, 769 -cottony and other soft seeds, 1bvalue of the imports of, VIII. 735 animalcules said to spring from, III 200, 204, 211. Seedytoe, XXI 562 SUBLAND, XX. 32. See Zealand. Sceman (Berthold), on the colouring of tea, XXI. 87 Sées, town in France, XX. 32 SEETZEN (Ullich Jaspar), traveller, XX Segar, garter king of arms, XI. 322 SEGESTA, city of Sicily, XX. 32, 39, 243. Segestan. See Scistan. Segestes, X. 575. Segestria, genus of arachnides, III 379. SEGMENT of a circle, XX 33; X. 513. Segment for a chief, And 80, An 20, Segment (Prof.), original principle propounded by, I. 720—on capillary attraction, 731; XII 97—on cohesion, VII 57, 61-his table of the forms of the curve. 62 SEGNI (Bernardo), historian, XX. 33 SEGO, town in Bamburia, XX. 33; II. 228 SEGORBE, town in Spain, XX 33. Silgovia, Spanish province, XX 33. - city, XX. 33-aqueduct at, III. 336 -canal of, XX. 491. Segraisiana, II 739. SEGUIDILLA, XX. 33. Seguier (M.), X. 175. Seguin (M.), on bathing, IV. 500-his theory of tanning, XIII 304—on stratification in electric discharges, XXI. 630. Segur (M), X. 157. SEIFHENNERSDORF, town in Saxony, XX. 33, XI. 314. SEIGNIOR, or Signior, XX. 33. SEIGNIORAGE, XX 33; VII. 75; XV. 423, 424—table of, under different British sovereigns, VII. 76-Hume on, XX. 341. n. 3. SEIGNIORY, XX 33. Scimens, XXI 373 SEINE, French river, XX. 33; X. 240; XVII. 280, 647—fishes found in, XX. 36.

— department of France, XX. 34.

SEINE-ET-MARNE, in France, XX. 34; X. 242. Seine-et-Oise, in France, XX. 35; X. 242. Seine-Infratieure, in France, XX 35; X. Seir (Mount), XII 357. Scisachthela, IV. 195. SEISIN, XX. 36; XII. 379. Seismograph, electric, XXI. 644. SEISTAN, In Asia, XX. 36.

384: XXI, 244, 245.

-teeth of, XVI. 422.

793, 802,

(Mr), on birds, XVL 733, 748, 777,

nicle, III. 720-on King James's Bible,

SEL—SEM IV 703-on the Chancellor's equity, VI 411-promoted the publication of Walton's Polyglot Bible, XXI 695 Sele, river, XII. 638, XX 238. Selen copper lead, mineral, XV. 117. Selen-sulphur, XV 123. Selenic acid, VI 478, XV 64. Selenious acid, VI 478. Selenite, mineral, XV. 95 Selenography, IV 89 — selenograph 89 - selenographic charts, VI 426. SELEUCIA, ancient cities so named, XX, 38, - PIERIA, XX. 38-coms of, XVI. - TRACHEOTIS, XX 38 SELEUCIA-ON-THE-TIGRIS, XX. 39. Seleuciani, heretics, XI 352 Seleucidæ, era of, XX. 39; VI. 671dynasty of, XX 910, 911, 904. Seleucis, in Syna, XX. 904—coms of, XVI. SELEUCUS I, XX 39 - Nicator, XX. 38, 39, 910; XVII. 434-Antioch founded by, III 273. Self-esteem, XVII 562 Self-knowledge, its importance taught by Socrates, XX 396 Self-love, I. 360-analysis of, 382-significations assigned to, by Hartley, 445-Aristotle on, III 564. Selfish system in morals, XV. 551. Self's pump, XII. 175. Selgovæ, Caledonian tribe, VI. 74; XIX. 742 SELIM I. and IL, emperors of Turkey, XX. 39, 911; III. 363; XXI 369

III., reign of, XXI 370-372-strangled, 373. SELIMNO, town in Turkey, XX 39. SELINUS, in Sicily, XX 39-taken by the Carthaginians, VI. 281-coms of, XVI. 366—sculptures of, XIX. 853 Selfier (Alexander), XX. 39; VII. 697; XIII. 13. Sected burgh, XX 40.
Selkhershire, XX 41—agricultural statistics of, XIX 796, 797, 798—population, 799. Sella (Joseph), his photographic process, XVII 799 SELLASIA, town of Luconia, XX. 42-battle of, 502. Sellignes (M), his achromatic object-glasses, XIV. 777. SELVA, town in Spain, XX 42. Semaphore, at Portsmouth, XVIII. 378on railways, 777, 778. Semblis, genus of insects, IX, 170. Semempses, Egyptian king, VIII. 454. Semen, animalcules in, XXI. 975—seminal tubes, ducts, and vesicles, III. 69-fluid, XVII 683. SEMENDRIA, town in Turkey, XX 42. Semennood, in Egypt, VIII. 497. SEMI-ARIANS, XX. 42. Semicircle, XX. 42; X. 513. Semicolon, XX. 42; XVIII. 658. Semidiameter, XX. 42; X. 513. Semionotus, genus of fossil fishes, XII. 334. Semiophorus, genus of fossil fishes, XII. 344; XVII. 127. SEMIPALATINSK, in Asiatic Russia, XX. 42; XIX. 550. SEMI-PULAGIANS, XX. 42; XVIII. 477. See Pelagius. SEMIRAMIS, queen of Assyria, XX. 42; III 778; XV. 764—Babylon said to have been founded by, IV. 340. Semitic languages, XIII. 209, 210, 225; classification of, XVII. 535—philology extended to, 533 - sub-semetic lauguages, XIII. 226. nations, XI. 541; IX. 351.

SEMITONE, XX. 42. See Music.

SEMILER (Johann Salomon), theologian, XX. 43; XIX. 828; XXI. 183. SEMLIN, town in Austria, XX. 48. Semnopithecus, genus of manmalia, XIV.

# SEN-SEP Senac (Jean Baptiste), physician, XX 43.

Senan (St), VI 754. Senarmont (General), III 686 - (M. de), on the conduction of heat, I 952-on optics, XVI. 550, 654, 667 Senarmontite, mineral, XV. 113 Senare, XX. 43—of Belgum, IV. 612— Roman, XIX. 296, 297, 316, 317, 323 of the United States, XXI 429and senatus academicus in universities. 462, 471, 486, 481. Senators, XX 43, 44-badges and pinileges of Roman, 44. Senderos on gunnery, XI 110, 135, 145 Senebier, on the gaseous exhalations of plants, V. 105—on the effects of light, XIII. 459, 460. SENECA (L. Annæus), the philosopher, XX. 45, XIX. 337 - on comets, I. 568tragedies of, VIII 141-on optics, XVI. 521-on the surmullet, XII. 279. - (M Annæus), thetorician, XX. 44. Senefelder (Alvis), inventor of hthography, XIII. 510 SENEGAL, river, XX 48, II 214; XVII. 647. - French colony, XX. 49, II. 226-Adanson's observations there, 130. SENEGAMBIA, in Africa, XX. 49; II 226. Senelops, genus of machindes, III 381 SENFSCHAL, XX. 51. Senior (Nassau W), on a provision for the poor, XVIII. 296, n 1 SENLIS, town in France, XX. 51. Sanna, a drug, XX. 51-plants yielding, V 191. - African town, XV. 670, XX. 405. Peislan town, XX. 807.
SENNAAR, in Africa, XX. 51; II. 224, 225 -Bruce's residence at, V. 600. Sennacherib, 111. 778 Sennebler (M.), on Rousseau, XIX. 449, SENNERTUS (Daniel), physician, XX. 52. SENS, French town, XX 52. Sensation, XIV. 563, 567, XVII 670, 671; XIX. 111, 119—Locke on the ideas that result from, I. 110, 111, 112—peculiar to animals, III. 170—acute sensibility of ants, 262-in the bee, IV. 574-Con-brutes, 94-crustacea, VII. 538. SENSATIONALISM, or Sensualism, XX. 52. Sense (common), I. 403—Reld on the principles of, XIX. 2. - (moral), l. 364; XIV. 580; XV. See Conscience. Senses, XIV. 563, 566, XVII. 677-those of man and other animals compared. III. 176, 178-their acuteness in the Arabs, 348; and in the blind, IV. 773, 777 - Aristotle on the, III. 649 - disorders from irritation of the nerves of the, XVII. 700-of ants, III. 262, insects, IX. 44; fishes, XII. 218-alleged transference of the senses in meaneric sleep, XX. 424, 429, 432; rests on no satisfactory evidence, 442, 446. See Sensation, Hearing, Smell, Taste, Touch, Sight. Sensibility, XVII. 670, 671. Sensitive plants, V. 108. Senso-motory electricity, XVII. 671. Sensorium, commune, XVII. 558, 677. See Brain. Sentiments, in phrenology, XVII. 562. Sentinum, battle of, XIX. 805. Sepals, leaves of the calyx, in plants, V. 117, 122. Separate system, in prison discipline, XVIII. 573, 582. Sepedon, genus of insects, IX. 255. Sephres, Egyptian king, VIII. 455. Sepladæ, family of mollusks, XV. 398fossil, XVII, 113. Sepiola, genus of mollusks, XV. 400. Sempach, battle of, XX. 884. Sepioteuthia, genus of mollusks, XV. 400. Sempronius, Roman consul, VI. 295. SEPOURY, or Sipry, in Hindustan, XX, 52.

#### SEP-SER

SEPOYS, XX. 52-insurrection of, in 1857, XVI. 301, measures for suppressing, 312, in the Punjab, XVIII 693 Sepp (Chr.), his work on insects, IX. 5 Seppings (Sir R), his improvement of the block under ships in graving-dock, VIII 76-his improvements in ship-building, XVI. 96, 97, 98-on diagonal trussing, XX. 181, 182, 190. Seps, genus of reptiles, XX. 38 Sepsis, genus of insects, IX. 251.

Septa, in botany, V. 131. - See Ceuta.

Septana, cement made from, XX. 714. SEPTEMBER, XX. 52-gardening calender for, XI 760

Septennial law, in France, X. 186. parliaments, act for, V. 455—attempt to repeal it, 458.

Septuagesima, XX. 52 SEPTUAGINT, XX. 52; XIX. 889; IV. 698, XI 552; XII 768; XVII 519 SEPULCERE, regular canons of St, XX.

- (Knights of the Holy), XX. 56. See Burnal, Tomb. SEPULVEDA (Juan Ginez de), XX. 56. SEQUANI, XX. 56.

SEQUESTRATION, XX. 56; IV. 418. SEQUIN, coin, XX. 56; XV. 441, 442 SERAGLIO, XX. 56—at Constantinople, VII

SERAING, town in Belgium, XX. 56 SERAMPORE, town in India, XX 56-translation of the Scriptures printed at, VI.

Serapeum, VIII 502; XIV. 493 Seraphim, VI. 527 Serapion, ancient physician, XIV. 452;

XX. 815. SERAPIS, XX. 57; VIII. 502-image of, at Alexandria, IL 469 - temple of, VII

fossil mollusks, XVII. 109. Seraptia, genus of insects, IX. 134. Serassi on the organ, XVI 711. Serbonis (Lake of), VIII. 429. Serena (La). See Coquimbo. Strenidse, family of fishes, XII 218 Sirenoids, fishes, XII. 318 SERES, Turkish town, XX. 57.

Asiatic people, III. 752; XX. 57, 286

Sereth, river, XV 312 Serfs, Russian, XIX. 523. Sergan. See Kerman.

SERGEANT-AT-LAW, XX 57-at-arms, 1b common, ib.—in the army, ib.; III 665. SERGEL (John Tobias von), sculptor, XX.

SERGIPE (del Rey), province of Brazil, XX. 57; V. 295

Sergius, monophysite, XV. 501. Seriatoporidæ, zoophytes, XXI 1005. Serica, in Asia, XX. 57, 286 - genus of insects, IX 125. Sencaria, genus of insects, IX. 214

Sericomyia, genus of insects, IX. 240 Sericostoma, genus of insects, IX. 180. SERIES, XX. 57—infinite, in algebra, II. 529—reversion of, 532—in fluxions, IX.

SERINAGUR, town in India, XX 57, 308 SERINAPUR, INWI II IIIUI.
SERINAPUR, IXX 57—Lord Cornwallis's
expedition against, V. 541; XI. 498,
499—stormed by the British, V. 567;
XI. 499, 502; XXI. 818—monolithic
obelisk at, XVII. 619. SERINO, town of Naples, XX. 58.

Senola, genus of fishes, XII. 297. Seriolella, genus of fishes, XII. 298. Serlio, notice of his architectural publications, III. 451.

SERMIDE, town in Italy, XX. 58. Sermon, distinguished from a homily, XL

SEROHEE, town in India, XX. 58. SERON, town in Spain, XX. 58. Serous membrane, IL 888-in the feetus, 839.

SERPA, town in Portugal, XX 58. SERPENT, musical instrument, XX. 58; AV. 711.

# SER-SES

Serpentarius and Serpens, two constellations, IV. 80

Serpentiform apodals, sub-order of fishes, XII. 229.

SERPENTINE VERSES, XX 58. - mineral, XV. 79-rock, 135, at

Portsoy, IV 413
SERPENTS, XX. 58; XIX. 39 et seg—their power of abstinence, II 52; III 180 their bones, 87 et seq; XIX. 42, 48—ears, III 99—teeth and poison fangs, 113; XVI. 431, 432, XIX. 44—effects of their poison, 45, XVIII 130—theory of its action, XIX. 46—tongue, 47 alimentary canal, ib - digestion and deglutition, ib.-circulation, 48-lespiration, ib -brain, ib -general envelope, ib -colours, 49-production, 50-geographical distribution, ib; XVII. 634burrowing, 55-fiesh-water, 58-teriestrial, 55—non-venomous, ib —true, 42—tree, 57—venomous, 63, 67—sea, 65 worm-like, 55—poisonous bites of, XIV 440—fossil, XVII. 153, 640—of Europe, XIX. 51—America, 54, II 714—Africa, XIX. 52—Asia, 53—India, XI 456— Borneo, XIX. 53, 54, 60, 86. See different countries under the head zoology. - (Isle of), XIX. 512, IV 742, XXL

376 Serpent's (The), deception of Eve, XXI.

SERPUCHOV, town in Russia, XX 58. Serpula, genus of annelides, XI. 294-fossil, XVII. 101. Serpularia, fossil moliusks, XVII. 110

Serpulites, fossils, XVII 101 Serra Capriola, Neapolitan town, XX.

do Frio, diamond mines of, VIII 2. SERRANUS (Joannes), XX. 58 genus of fishes, XII. 274. 276fossil, 343

Serrasalmus, genus of fishes, XII. 247. Serravalus, Italian town, XX. 59.
Serre (M.), on harmony, XV. 701, 702.
Serres (Marcel do), on the araneides, III.
373—on insects, IX. 43—his works on insects, 13.

Serricornes, family of insects, IX. 104. Serripes, genus of mollusks, XV. 349 Serropalpides, family of insects, IX. 132. Serropalpus, genus of insects, IX. 132. SERTORIUS (Quintus), XX. 59; XIX. 322, XX. 458.

Sertulariadæ, zoophytes, XVI 1006 Serum of the blood, II. 780, 781, 782; XVII. 664.

SERVAN (St), town in France, XX. 59. SERVANDONI (G Geronimo), architect, XX 59.

SERVANT, XX. 59—servants in factories, XIV. 348; printworks, 349—domestic, ib—master and, 345; XV. 569—liveried, XIII. 525.

SERVETUS (Michael), XX 59—circulation of the blood partially discovered by, II 760 and n—his execution approved of by Melancthon, VII. 482-Calvin's conduct to, VI. 110. SERVIA, XX. 61—alphabet of, II. 614-

language, XIII. 214, IX. 392.

SERVICE, choral, XX. 68. Service-tree, XI. 716.

Servitors, in the University of Oxford, XXI, 456.

SERVITUDE, Penal, XX. 63; XVIII. 580. SERVIUS TULLIUS, XX. 63; XIX. 297, 357. Scsamoid bones, II. 829. Sesamum, or Sessamum oil, XVI. 495—

cultivation of, in Bengal, IV 649.

Seserinus, genus of fishes, XII. 298. Sesertesen L. II. III., Egyptian kings, VIII. 456.

Sesia, genus of insects, IX. 210. Sesiades, family of insects, IX. 210. Sesochris, Egyptian king, VIII. 454. Sesostris, XX. 63; VIII. 456; XL 388architectural remains attributed to, III. 436 - army and military exploits of, 620-different names of, ib., n. 3-date of his reign, ib., n. 5—great ship said to have been built by, VII. 714.

# SES-SEY

SESSA, Neapolitan town, XX. 63 SESSION (Court of), XX. 63; XIX 758, 810; VIII 395-trial of civil cases by jury introduced into, XIII. 24-kirksession, XVIII 493.

SESTERTIUS, Roman con, XX. 63, VII 69; XV 433, XVI 383

SESTINI (Domenico), numismatist, XX 63 Set, meaning of the phiase taken a set, XX. 749

or Seth, Egyptian deity, VIII 438. Seth, son of Adam, III 267
Sethee, kings of Egypt, VIII. 461, 462.
Setheum, temple of, VIII 509.
Seth, Egyptian deity, VIII 436 Seton, in surgery, XX 826, XXI 559, n
—improved kind of, XX 827.

Setter-dogs, XX. 218. SETTLE (Elkanah), poet, XX 63 town in Yorkshire, XX. 63
Settlement law, XVIII 299 SETUBAL, town in Portugal, XX. 64 SEVAJEE, XX. 64-founder of the Mah-

ratta state, XI. 479. SEVASTOPOL, XX 64. See Sebastopol Seven, veneration paid to the number, III. 191, XIX 560.

- Years' War, XVIII. 652; XIX. 482.

Sevenoaks, town in Kent, XX. 64. SEVER (St), town in France, XX. 64.

Severinus (M.A.), XX. 818
Severinus (M.A.), XX. 818
Severn, river, XX 64, 228; VIII 716,
X. 679; XV. 518; XVII 647—bore on,
XVI 65—physical characters of, 88
— navigation of, X. 680—Severn and Thames Canal, 681; XX. 64

SEVERUS, Roman emperor, XX. 65, XIX. 346—Byzantum destroyed by, VI 43 his visit to Egypt, VIII. 472; Christians there persecuted by, ib.pedition against the Caledonians, XIX. 741—his death at York, 742—wall of, V. 379; XIX. 343, n.

— (Cassius), apparition said to have been seen by, III. 310 SEVIGNÉ (Marie de Rabutin Chantal, Mar-

quis de), XX. 65-her letters, XVIII.

SEVILLE, XX. 65—persecution of the Jews at, XII 780—oranges of, XVI 700— Columbian library at, XIII 410-university of, XXI 492.

- museum of, XXL 322 Sewel on the Quakers, XVIII. 714. Sewerage, or Sewage, XIX. 618—application of, to land, IL. 297-meadows near Edinburgh irrigated with, 326-of London, XIII. 678.

Sewers, building of, V. 734-of towns, III. 495, 497; VIII. 128; XIV. 444; XIX.

618-of Rome. See Cloace SEWESTAN, in Afghanistan, XX. 67.

Sewin, bull-trout, XII. 240. Sex, III. 170—both sexes in the same individual, 171 (see Hermaphrodite) neuter sex, in ants, 261-in bees, IV. 570, 571-in reference to annuities, III. 227-mortality less in the female sex than in the male, 230-its influence on insanity, XIV. 536—proportion of their numbers, XV. 622; in Russia, XIX. 521—separation of the sexes, in fox-hounds, XI. 770.

SEXAGESIMA Sunday, XX. 67 SEXAGESIMALS, XX 67; III. 577. SEXTANT, XX 67; XIII. 687; XVL 28, 29, 30-causes of error in the use of, 32 its importance in seamanship, XX. 26 See Quadrant, Mural Circle. SEXTUS EMPIRICUS, XX. 67—his scepticism

XIX. 707—estimate of his views, 709. Sexual organs, in man, III. 69-in brutes, 113-plants, V. 125, 126 et seq., 152.

Seybert (Dr), on the population of the United States, XV. 608, n., XVIII. 339. SEYCHELLES, islands, XX. 68; XIV. 364. Seymour (Jane), wife of Henry VIII., VII. 482; VIII. 701, 704.

### SEY—SHA

Seymour (Sir Hamilton), his Russian diplomacy, VIII. 40. Seymour's mode of training peach trees. XI 710

- rope-machine, XIX 406. SEYNE, French town, XX 68 SÉZANNE, French town, XX 68 SEZZA, or Sesse, town in the Papal States, XX 68 SFAX, town in Tunis, XX 68

SFORZA (Ludovico), XX 68; XII. 651; XX 885 'SGRAVESANDE, XX 68 See Glavesande.

Sgricci (Tommaso), improvisations of, XVIII. 112

Shad, fish, XII 236; IX. 764. Shadbolt (George), his microscopic photographs, XIV. 801, XVII 552—his pho-

tographic process, 548. Shaddai, name of God, XXI. 189.

Shaddock, V. 186. Shade, in drawing, VIII 173.

Shadoof, Egyptian machine for raising water, VIII. 427

Shadow, line described on a plane by, VII 789—blue shadows, XVI 691. Shadwell (Thomas), dramatist, XX. 68;

VIII 163 Shaft, in architecture, III. 512-of coal-

pits, VII. 120—of mines, XV 223—of steam-engines, XX 655 SHAFTESBURY (Earls of), XX. 69. See

Cooper. town in Dorsetshire, XX 69.

SHAH ADDULAZIM, Persian village, XX. SHAHABAD, in India, XX. 69-town, XVII

SHAHJEHANPORE, in India, XX, 69-tra-

gedy enacted at, in the sepoy insurrection, XVI. 309. Shakers, American Communists, VII. 208.

SHAKSPEARE (William), XX. 70—anecdote of, at the Globe Tavern, II. 592-portions of his plays taken from Bandello's tales, IV. 411-examples of comparison from, VII. 219, 220—his dislegated of the unities, VIII. 153—defence of his comic scenes in tragedy, 154 - his ments as a dramatist, 157—seems to have been indifferent to fame, 159—his plays revived by Garrick, 166 — Dr Farmer on his learning, IX. 482—his magination, XVIII. 92 - his poetry, 95, 122—alleged to have adopted some of Greene's plays, XI. 37—his tendency to hyperbole, XII. 191—his jug, XVIII. 433-Sir Walter Scott compared with, XIX. 280—editions of, by Capell, VI. 206; Johnson, XII. 799, Pope, XVIII. 381; Rowe, XIX. 451; Malone, XIV. 113; Steevens, XX. 673; Theobald, XXI 180—his share in the authorship of the Two Noble Kinsmen, XX. 495 birth and burial-place of, 747-creator of the English drama, XXL 165-treatment of his plays in the seventeenth century, 171 - Voltaire's estimate of,

- Tunnel, near Dover, XVIII 761. Shale, XV. 83, 142, 169-bituminous, 83; II. 628.

Shallot, culture of, XI 741. Shalmaneser, III. 778, XXI. 405. SHAMARA, or Tchemakha, in Asiatic Russia, XX 90; XIX. 551.

Shame, almost unknown among the American savages, II. 693. Shamo, X. 690-desert of, XVII. 614. SHAN-SI, province in China, XX. 92.

SHAN-TUNG, province in China, XX. 92.
SHANGHAE, XX. 91—opened to British commerce in 1842, VI. 597—exports

and imports of, 591—silven exported from England to, XVIII. 472.
SHANNON, Irish river, XX. 91; VI. 758; X. 389; XII. 505—navigation of, XIX. 422-source of, XIII. 827, 487-salmon

fisheries, IX. 619. Shap-fells, XXI. 842—abbey, 844 wells, Ib.

SHAPINSHAY, one of the Orkney islands, XX. 92; XVL 719.

# SHA-SHE

See Sapor. Shapoor Shápúr, ancient monuments at, XVII 433 Shuks, XII 321 et seq -odontology of, XVI. 422-distribution of, XVII 635shark-fishing in Iceland, XII. 203; in Ireland, IX 634-in the Indian seas, XI 456-Port-Jackson shark, XVII 117—fossil, XIL 341; XVIL 117, 118 See Squalidæ

Sharon, in Palestine, XVII 182. SHARP (Abraham), XX. 92, I. 699 and

n. 2. (GRANVILLE), XX. 93-his opposition to the slave trade, 321-settlement for negroes at Sieria Leone suggested by, 272.

- (JAMES), archbishop of St Andrews, XX. 93-his hostility to the Covenanters, V. 428-Mitchell's attempt to assassinate him, 429—mui dei of, 430. (JOHN), archbishop of York, XX.

93 (WILLIAM), engraver, XX 94follower of Joanna Southcott, 454. on surgery, XX 819.

SHARPE (Daniel), geologist, XX. 94—on the geology of the neighbourhood of Lisbon, XIII 507, 508—on the effect of cleavage on fossils, XV. 179—on foliation, 180.

and Robarts, their self-acting mule, VIT. 445.

- (Dr), on the causes of alterations in language, VIII 798, n 5

· (Samuel), his anecdotes of the poet Rogers, XIX. 246, n.

(William), his work on Rogers' Recollections, XIX. 248.

Sharpey (D1), his system of anatomy, II 770-detection of the imposture of a clairvoyant by, XX 439—on echino-derms, XXI. 983, 992, 993

Shary, river, V. 51; XVI. 270 Tschadda

SHASTER, XX. 94, L 491.

SHATZE, town in Russia, XX. 94. Shavings of wood, electricity of, VIII. 564

Snaw (Dr Thomas), XX. 94-ignis fatuus observed by, XIII. 457.

- (Dr), on the harvest bug, III 389 -on the hamster, XIV. 183-his General Zoology, XVL 730-on tortoise-shell, XIX. 20-on the gecko, 36-on the camelcon, 37.

(John), on the spawning beds of salmon and trout, IX 589, n. 3—his experiments proving that parr are young salmon, 591, 592,

Shawir, VIII. 479.

Shawis, XX. 94— Cashmere, VI. 309; XIV. 211; XXI. 274, 906—French, X. 252—Persian, XVII. 424—manufacture of, at Paisley, 89—Manchestor, XIV.

Sheaf, in heraldry. See Garbe. Sheale (Richard), XIX. 268.

Shearing of sheep, II. 352. - in woollen manufacture, XXI 923 Shearman (C. J.), on the sanitary state of Sheffield, XX. 98.

Shears, for cutting iron, XII 561. -bill, bird, XVI. 808.

Sheathing of ships, V. 519; VII. 351, 672, 542; XVI. 96; XX. 118, 174, 105. Sheave, XIV. 401—in block-making, IV.

Sheba, X. 460, n; III. 355-ruins of, 356. Shebeck, Egyptian kings, VIII. 464 SHEE (Sir Martin Archer), XX, 94.

Sheep, IL 845; XIV. 212; XVII. 632 of America, II. 713—Arabia, III. 347

—New South Wales, IV. 280—Derbyshire, VII. 755-Dorsetshire, VIII. 111, 112; II. 346 - Durham, VIII. 267county of Down, 128—England, 723—Lincolnshire, XIII. 491; II. 345—France, X. 248—Germany, 586—Iccland, XII. 200—Ireland, 518—Huntingdonshire, 49-Leicostershire, XIII. 320; II. 345-Romney Marsh, XIII. 66; II. 846—Isle of Man, XIV. 244—Scotland, XIX. 798—Spain, XX. 489—Palestine, XVII. 191-Papal States, 242-Sweden,

#### SHE-SHE

XX. 861-Bakewell's improvements on, II 345, XIII 320, Ellman's, II 346-II 345, XIII 320, Emmar s, 11 one— Cheviots, ib, 347—Cotswold, 346—black-faced, 347; VIII. 724—cross-bleeds, II 347—general management of, 347, 350—salving, or bathing, 348 feeding, 349 - shearing, 352 -Downs, XX. 839-legislation against excessive sheep husbandry, XXI 909gadfly of, IX. 245-teeth of, XVI 466. times of appearance of the permanent teeth, 468—fat of, 493—flesh, as food, IX. 762—foot-1ot in, XXI 563—leg-evil, 1b —sheep-bot, 569. See Vetermary Science, Wool

Sheep-skin leather, XIII 305. Sheep's head, fish, XII 286

Sheer, in a ship's deck, XX 180, sheerplan, 185,

SHEERNESS, town in Kent, XX. 95-dockyard at, VIII 82-Artesian well at, III. 681-population, XIII. 67.

Sheet-glass, X. 664. Sheet-lead, V. 755

XVIII 324 and n-his Rehearsal, VIII. 202-monument to Dryden exected by. 203

Shegkius, blind author, IV 779. SHEHR, town in Arabia, XX. 99.

- Zaur, town in Kurdistan, XX. 409 SHEIL (Richard Lalor), XX. 99-on combinations in Ireland for Catholic emancipation, V. 653-on the mactivity of ministers at that crisis, ib -his cooperation with O'Connell in obtaining Catholic emancipation, XIL 501 - his report on reforming the mint, VII. 82. - on Persia, XVII. 427, 428.

SHEKEL, XX. 100, VII 66. SHELBURNE (Earl of), XX 100—his administiation, V 502, 505, IX. 852, XVII. 730, 731.

in Nova Scotia, XVI, 345. SHELDON (Gilbert), archbishop of Canter-

bury, XX. 100 on the lymphatics, II. 766, 803.

Sheldonian theatre at Oxford, XVII. 35. Shelf-pieces, in ship-building, XX 186 hell, in gunnery, XI. 142—improved method of throwing, XX. 28—shell moulding, VI 185. See Gunnery, Artillery.

Shell-fish, III. 191; VII. 537-as food, IX. 765—supply of, to the London market, IX. 649.

Shell-gold, X. 703.

Shell-lac, the best insulator in electricity, VIII. 540. See Lac.

Shell-marl and shell-sand, as manure, II. 303, XIII 681.

Shell-traps, IX. 831. Shelley, fish, XII. 243.

(MARY WOLLSTONECRAFT GODWIN). XX. 104-her memolis of Shelley, 102 -character of her Frankenstein, XIX

- (PERCY BYSSHE), XX. 100, 840his poetry, XVIII 126—his intimacy with Byron, VI 39.

Shells, calcareous coverings of the mollusca, XV. 319 et seg—fossil, XVII. 103 et seg.; XV. 202 et seg—Mi Cuming's collection of, 328, 329 of cheloniad reptiles, IIL 87 - bright colours of tropical, XVII. 636 - faint colours of deep sea, ib.-fossil, disbelief of their marine origin by Voltaire, XXI. 666.

Shelluhs, African people, XV. 594. Shelvock (Captain George), on California, VI. 97.

Shem, descendants of, VIII 46. SHENDY, town in Nubis, XX. 104. SHEN-SI, Chinese province, XX. 104. SHENSTONE (William), XX. 104-judicious reflections of, I. 119, n. 2—poetry of, XVIII. 124. Shepherd, II. 848, 351 et seq.

### SHE-SHI

Shepherd invasion of Egypt, VIII 455origin of the shepherds, 456-shepherd kings, 457-their departure from Egypt, 460

- (Mr), on the improvements of the Danube, XVI 63.

Shepherd's electrical clocks, VII 27. Sheppey (Isle of), XIII 64, 66 — fossil crustacea of, XVII 102.

SHEPTON-MALLET, town in Somerset, XX.

Sherard (William), VIII 29 SHERBET, XX 105

SHERBORNE, town in Dorsetshire, XX. 105 SHERBURN, in Yorkshire, XX 105 SHERBURNE (Sir Edward), XX. 105 Shere, in coinage, VII 72, 75, XV. 425 Sheribon, m Java, VI 527. SHERIDAN (Frances), XX 106

- (Mr), his process of distillation, VIII 50.

- (RICHARD BRINSLEY), XX, 106-his speech against Mr Hastings, V 523—on the French Revolution, 535—on the French war, 551-on the expedition to Holland, 573-on the peace of Amiens. 586. 589-part taken by, in the trial of Warren Hastings, XI. 239-comedies of, VIII 166-his share in Drury Lane Theatre, XXI 174

- (Dr Tпомаs), XX 110. - (Тномаs), XX 111. Sherif, Arabian title, III. 350

SHERIF-ED-DEEN-YEZDI (Moolah Ali), his-

torian, XX 112. SHERIFF, XX. 112, VII 467; VIII 774—of London, XIII. 677—sheriff-courts, in Scotland, XIX. 811 - sheriff-substitute,

(Mr), on the culture of the willow, IV. 488.

(Patrick), on farming in East Lothian, II 368. Sheriffmuir, battle of, V. 453; VIII. 251.

SHERLOCK (William), divine, XX. 112 - (Dr Thomas), bishop, XX 112 Sherry wine, XXI. 884, 951-alcohol in,

889, 890 SHERWIN (John Keyse), engraver, XX.

112 - mathematical tables of, XIII 555.

Sherwood Forest, XVI 340. Sheshouk, or Sheshak, Egyptian king, VIII. 463.

SHETLAND, islands, XX. 112-cattle, II. 343-aurora borealis IV. 242-duns in, VIII. 244-cod and ling fisheries, IX 646—herring fisheries, 640, 642—agricultural statistics, XIX, 796, 797, 798 population, 799.

- (South), XVIII. 181. Shiah, Mohammedan sect, XVII 428. SHIELD (William), musical composer, XX.

114: XV. 716. XX. 115; V. 722; III. 632.

in heraldry, XX. 115; XI. 321, 323, 324.

of the Thames Tunnel I. 879 Shieldrake, bird, XVI, 817. SHIELDS (North and South), XX. 115. Shielducks, birds, XVI 817. SHIFFNAL, town in Shropshire, XX, 115.

Shift, in ship-building, XX. 184 Shiltes, Mohammedan sect, XV. 306. SHIKARPOOR, town in India, XX. 116, 305

-cultivation near, 304. Shildag (Loch), fishery, XIX. 427; IX 640, 642,

Shillibear's (The Rev. Mr) sustaining battery, XXI 616.

SHILLING, XX. 116; VII. 71, 76; XV. 443. SHILOR, XX. 116; XXI. 207. Shin, river, XX. 841—smolts from, return-

ing as grilse, IX. 596—salmon of, 598. —— (loch), XIX. 794; XX. 841. Shin-bone, III. 35, 37. SHIN-KING, Chinese province, XX 116.

Shingle-drift, in geology, XVII. 585. Shir-building, XX. 116; XVI. 96—its relation to hydrostatics, I. 724-forms of ships best adapted for speed, 888, 889block-machinery, 879; IV. 783-coppersheathing (see Sheathing) - capstan,

# SHI-SHO

VI. 224-building of masts, 262-caulking, 343-trade in colonial-built ships, 150—iron ship-building, at Glasgow, X. 650—improved by the Crusades, VII. 533—Seppings' improvements in, XVI. 96 - artificially picpared tumber not suitable for, XXI. 279-in Brazil, V 299—Maine, XIV 98—New York, XVI. 220, 226—Holland, XI 583—Liverpool, XIII 519-Sunderland, XX. 808-United States, XXI 426 See Dockyards, Dry Rot, Resistance of Fluids, Navy, Steam-navigation, Timber.

Ship-canals, XVI 55-through Nicaragua, 245, 246, 247 - one proposed between Suez and Pelusium, XX. 789.

Ship-money, V. 394. Ship-worms, XV. 353—fossil, XVII. 108. Sec Teredo.

Shippen (Di.), on surgery, XX. 819. Shippeng of England, VIII. 737, 742—belonging to different ports of Britain, 738, Scotland, 739, Ireland, ib.; colonies of the United Kingdom, 740 -British registered vessels employed in the home-trade, 742; in the foreign trade, ib , in the trade of the United Kingdom, Bistish and foreign, 741-of France, X. 262, 266—Ireland, XII. 522—Scotland, XIX 806—Holland, XI. 585— London, XIII. 662 - Liverpool, 518-New York, XVI. 226, 227. See the

Geographical articles generally. Ships, magnetism of, I. 990-forms of, for speed, 889-Davy's protectors for, 971 Chinese, VI 583-collision of, at sea, VII 130 — hghtning-conductors for, VIII. 609—insurance of, XII. 419 wiecks of, on the British coast, XIII. 446 - guard ship, XI 74-iron ships, XVI. 100-iron and wooden ships compared, XX 182 - French and Eng-lish compared, 131-designing of, 140ships of Tarshish, XXI 26--cheaply built often last longest, 280-tonnage, 303-ventilation of, 542. See Navy. Ship-building, Shipping, Anchor, Rigging, &c.

Shipwreck, means of escape from, XIII. 439, 441 - plundering of shipwrecked vessel in Denmark, VII. 740-"wreckers" of the Bahamas, for rescuing vessels from, IV. 367-shipwreck chart of the British Islands, XIII. 446-of British merchant vessels, XX. 28.

Shipwrights, Company of, XX 127-education of, at Portsmouth, VIII 83. SHIRAZ, city of Persin, XX. 206-vines of, XVII. 421-climate, 422-manufactures,

424-tobacco, XXI 294. SHIRE, XX. 206 - England divided into

shires by Alfred, II. 481-officers be-longing to, VIII. 720. See County. SHIRLEY (James), dramatist, XX. 206; XXI. 171.

- (Sir Anthony), XVII. 439—Jamaica invaded by, XII. 672. Shirt of need, XIII. 113.

SHIRVAN, in Asiatic Russia, XX. 207; VL 340, 842-ecclesiastical statistics, XIX. 528.

SHISHKOFF (A. Semenowitsch), XX. 207. SHITOMIR, Russian town, XX. 208; XII. 786.

Shiva, V. 724. SHOA, in Abyssinia, XX. 208; II. 56. Shock, electrical, VIII 601. Shoddy trade, XXI 918, 919.

Shode ore, in mining, XV. 222. Suoe, XX. 208.

Shoebury-ness, experiments in gunnery at, XI. 128, 145.

Shoeing of horses, XI. 672; XXI. 560. Shoemakers, diseases of, XIV. 442—number in London, XIII 660; in Scotland, XIX. 804.

Shoengaer, painter, XVII. 74. Sholapore, in India, XX. 208. Shooting, XX. 209.

- stars, XIV. 684 Shopmen, diseases of, XIV. 442. Shops, signs of, III. 323, 324—in London, XIII. 663; in Liverpool, 521.

# SHO-SIC

SHORE (Jane), XX. 227. - (Sir J.), his conduct in Oude, XVII. 22 and n 2 Shoreham (New), in Sussex, XX. 227-corruption in, V 472.

Shoring, in carpentry, V 749

mortality, XV. 601, 603

Short-horned breed of cattle, II 340 Short-sightedness, XVI 695

SHORTHAND Writing, XX. 227. See Steno-

graphy.

Shortredes' tables of logarithms, XIII. 555

Shot, XX. 213-case-shot, VI 308; XL 142 See Gunnery.

Shouaas, Bornouese tribe, V. 53. Shoulder, bones of the, III. 31—joint, 34 -muscles, 38-shoulder blade in the mammaha, 81; birds, 86; reptiles, 88. SHOVEL (Sir Cloudesly), XX. 227; XV. 797—ship-wrecked on the Scilly Islands,

Shoveller, bird, XVI 817.

Shrapnel shells, XI. 142-fuse for, III

Shrew, in zoology, XIV 150, XXI. 548 Shrewsbury, XX. 227, 280—battle of, VIII. 687—railways connected with, XX. 229.

Shrike, bird, XVI. 748.

Shrimp, VII. 541; IX. 765-Symington, VII 543-brine-shrimp of Trona lakes, IX. 532.

SHROPSHIRE, XX. 228 SHROUDS of a ship, XX 281.

Shrove-Tuesday, XX. 231.
Shrubs, XI 748, V. 78—for hedges,
XVII. 760—evergreen, ib—deciduous ornamental, 761 - nursery culture of, 766.

Shubneccadie, river, XVI 343. Shuckard (W. E.), his works on insects, IX. 20.

Shuckburgh (Sir George), on barometrical measurements, IV. 465, 466; I. 780—on the weight of air, XVIII 24.

Shuja (Shah), II 208 SHUMLA, in Turkey, XX. 231.

SHUMSHABAD, town in India, XX. 231. Shunting, in railway language, XVIII

SHUSHA, town in Asiatic Russia, XX. 231 SHUSHTER, town in Persia, XX. 231

Shutters of windows, V. 752. SHUTTLE, weaver's, XX. 231, 509; XXI 783, 788, 789 — fly-shuttle, VII. 441; XX. 509.

Shuttleworth (Sir J Kay), on education, XVII. 477, 479.

SIAR, in Sumatra, XX. 231.

Sialis, genus of insects, IX. 179. Siam, XX. 231; III. 735—language of,

XIII. 199, 206-Burman invasion of, V. 783—missions established in, XV. 271coins of, XVL 391-silk, XX 277trade with Singapore, 307—weights and measures, XXI 813.

- gulf of, XX. 232,

Siang, Chinese river, XI, 314. Sibbald (Sir Robert), his MSS in Advocates' Library, Edinburgh, XIII 401on the occurrence of Silurus glanis in Scotland, XII 259.

SIBERIA, XX. 284; XIX. 518, 520, 548; III. 734, 735—climate, 787; XX. 610 languages of, XIII. 199, 217 - Hansteen's magnetic observations in, I. 991; XIV. 60—mines of, XV 289, 240—an-AIV. 50—mines of, AV 259, 240—annexed to Russia, XIX. 473—criminals sent to, 525—fossil ivory, XII 664—Keergheez country of, XIX. 521—population, ib., 522—temperature, XVII. 617

Siberian beet, XX. 796.

Sibviline Books, or Verses, IL 648; XX. 235-magistrates appointed for keeping, VIII. 270

Sibris, XX. 234—Cumean sibyl, II. 648; VII. 576—cave of the sibyl, XX. 289. Stoken (Abbe), XX 885 on the educa-

### SIC-SIE

tion of the deaf and dumb, VII. 676, 681

Sichardus (Joannes), his edition of the Theodosian Code, VI 743 Sicilian diver, wonderful feats of a, VIII

vespers, XII 649; XX. 258 SICILIES, Kingdom of the Two, XX. 235-Joseph Bonaparte, king of, X. 141; Murat, V 615, XII 653, XV. 689 statistical details, IX. 397, 398; XII

634—navy, XX. 38—French trade with, X. 259; British, VIII 733—sulphur, XVII 624; XV. 123-universities, XXI 492 See Naples, Italy, Sicily

Sicily, island of, XX. 243-agriculture, 248—roads, 250—provinces, 255—population, 256—pointed architecture of, III 448-Athenian war with, IV. 205-Carthagmean invasions of, VI 281 et seq. —introduction of silk into, VIII. 276— language, XIII 213—libraries, 416 coms, XVI 364, XV. 442, 445-pleistocene deposits of, 217—papyrus of, XVII. 246—sulphui, 624; XV 123—height of mountains, XVII. 642, 643—Greek colonies in, XIX. 305, 309-Roman wars, 309 et seq —Plato's visits to, XVII. 788, 789, 790 — earthquakes, 616—weights and measures, XXI 813—wines of, 886 -map of, XII Plate. See Ætna.

Sickle, reaping with, II 313. Sickler (Dr), XI 346.

SICULIANA, town in Sicily, XX 264, 245 Sicyases, genus of fishes, XII. 307 Sicydium, genus of fishes, XII 306 Sicyogaster, genus of fishes, XII 307.

Sicyon, ancient Greek city, XX. 264 school of sculpture at, XIX. 853, 854. SIDDONS (Mrs), actress, XX. 264; XXL 175.

Sidera, genus of fishes, XII. 231. Sideral month, IV. 38—day, 23; XVI. 35—time, 39—astronomy, I. 838.

Siderite, mineral, XV. 69, 99. Sideroscope, Lebailiff's, XIV. 89. Sidesaddle, plant, V. 93, 182.

Sidi-Feruch, battle of, X. 197. Sidings, in railways, XVIII. 774. Sidlaw Hills, XVII 457; XX. 791; IX.

SIDNEY, or Sydney (Algernon), XX. 265; XVII 390, 391-notice of his execution in the London Gazette, XVI. 152.

(Sir Henry), in Ireland, XII, 477: XX. 266.

- (Sir Punne), XX. 266-his censure of old plays, VIII. 145, 147—his pationage of Spenser, XX. 506.
SIDON, XX. 268, 905; XIX. 573—com-

merce of, VII 184—gardens and or-chards of, XX. 902—pachalic of, 905. Sidra, gulf of, XXI 353.

Siebold (Dr), on Japan, XII. 689, 694the tea-plant in Japan, XXI. 88

— (M. von), on animalcules, III. 209 on serpents, XIX. 66. STEDLEC, in Polish Russia, XX. 270.

Siege, IX. 823; XXI. 719-artillery used in, III. 691, 692-principles on which conducted, 691.

Siegen, town in Prussia, XX. 270 - (Ludwig von), inventor of mezzo-

tanto, XX. 270. Siemens (C. W), his regenerative steam-engine, XX. 624.

-(Messrs), their differential governors, XIV. 410.

(Werner), on the electro-static capacities of telegraphic conductors, XXI. 98 and n -on electric telegraphs, 108.

SIENA, town in Tuscany, XX, 270—fall of meteorolites near, XIV. 631—Academy of Sciences at, II 68.

Sierra and Serra, XX: 271, 486.

LEONE, XX. 274; II. 227; XI 89.

Morena, in Spain, XX. 487—geology

of, 484. Nevada, in Spain, XX. 487—geology

of, 484 in California, VI. 96; XVII. 598, 594. of Peru, XVII. 470.

### SIE—SIL

Siete Partidas, Spanish code, XX 467 Sieu-tseuen, instigator of the iebellion in China, VI 598

Sieveright on the pyro-electricity of tourmaline, VIII 558

SIEVSK, in Russia, XX. 272.

SIEYES (Emmanuel Joseph), count, XX 273; X 50, 57 et seq, 112—his opinion of Napoleon, XV 792

Sigalphus, genus of insects, IX 188 Sigaretus, genus of mollusks, XV. 384

Sigebert, X. 4 et seq Sigeth, siege of, XXI 369

Sight, sense of, XIV 565 See Vision, Eyes.

- (Second), III 318, n. 1; VII 154.

Signilaria, fossil plant, V. 235

Signa, village in Tuscany, XX 273. Signals, naval, XX. 274; XVI 108, 109, XX. 24, 25-to find the longitude by, XIII 688.

- railway, XVIII 777. of electric telegraph, XXI 94, 100.

SIGNATURE, XX. 274; V. 12, IV 708, n. 3. SIGNET, XX 274

writers to the See Writers to the Signet.

SIGNORELLI (Luca), painter, XX. 274—his paintings at Orvieto, XVII 63 Signs, or written characters, remarks on,

I 66, 67-of the zodiac, IV 12-in arnihmetic, III 583, n, geometry, X. 508-signs or marks used by booksellers, V. 30-of shops and taverns, III. 323, 324. See Characters.

SIGONIO (Carolo), historian and antiquary, XX. 274.

Sihon, river, XII. 711.

Sikes' hydrometer, XIL 87.

Sikhs, XI 464; XVIII. 691—rise of their power, 692—war with the, V. 669, 671;

Sikkim, in India, XX. 274-mean temperature of, XI. 442-height of mountains, XVII 643.

Sikoko, Japanese island, XII 688 Sila (La), XX. 237

Silbermann (Gustave), his works on insects, IX. 18. (M), on the heat of the combustion of coal, XX. 630.

Silent system of prison discipline, XVIII

571.

Silesia, in Prussia, XX 274-agriculture 

sca-water, XVII. 572—earthy silica, XV. 69—aqueous deposits of, 144 silicified plants, XVII. 641.

Silicic acid, VI. 482
Silico, in chemistry, VI. 481—oxides of, in the earth's crust, XVII. 619.
Silicula, in botany, V. 136.
Silicula, in botany, V. 136.

Silis, genus of insects, IX. 110 Silistria, XX. 275; VII. 654—taken by

the Russians, XIX. 496—siege of, in 1854, XV. 818; XIX. 501. SILIUS ITALICUS (Caius), poet, XX. 275.

Silk, XX. 276—of Bengal, IV. 649—China, VI. 588, 597—Cochin-China, VII. 48— Granada, X. 794-Greece, XI. 16, 32-Hindustan, 458-Italy, XII. 640-Japan, 698—Lombardy, XIII. 658—the Two Sicilies, XX. 249—Tuscany, XXI. 394— imports of, from India, XI. 462—of the spider, III. 374, 375-ancient Asiatic trade in, 754—origin of, VIII. 276—imports of, into the United Kingdom, 787 -reduction of the duty on foreign, XIV. 288-silk stockings, XX. 706percilian silk, XXI. 788.

# SIL—SIM

Silk-cotton tree, IV. 840-order of plants.

SILK-MANUFACTURE, XX. 279-bleaching of, IV. 769—dyes better than cotton or linen, VIII 274—scouring of, 276—dyeing of, ib -aluming, 277 - method of dyeing it 1ed, 201; yellow, 298, orange, 299, 313, blue, 303, black, 305, green, 310; violet on purple, 312, 314—mixtunes of black, &c, 314—calendering, VI. 92—of Asia, III 757—Derbyshie, VII 755 - England, VIII 730, XIV 288; XXI 792—France, X 254; XXI. Belgium, IV 625—Italy, XII 640 Iteland, 521-Germany, X 590-London, XIII 663 — Lyons, 751 — Manchester, XIV. 254 — Persia, XVII. 421, 425— Scotland, XIX. 805-Spain, 490-Switzerland, XX 890.

SILK-WORM, XX 286, IX 205, 213-trade ın, in Lombardy, XIII. 653-species ın Jamaica, XII 681.

Sill of windows, III, 512: V. 739. Sillago, genus of fishes, XII 273. Sillery, wine, XXI. 883 Sillimanite, mineral, XV. 86. Silloch, fish, XII 269. Siloam, pool of, XII 736, 745. Silpha, genus of insects, IX. 114.

Silphales, family of insects, IX. 113. Silundia, genus of fishes, XII 262 Silures, V. 377, XI 350.

Silurian period, in geology, XV. 197; XVII. 587—fishes of, XII 351; XVII 640-fossils of invertebrata in, 96, 97 et seq —formation, in Russia, XIX. 517 — in New York, XVI. 215—Scot-

land, XIX, 790, 793 Siluridæ, or Siluroids, fishes, XII. 261, 258. Silurus, genus of fishes, XII. 261, 259— electric, I. 738; VIII 577.

Silvanite, mineral, XV 120.

Silvas of South America, XVII. 604, 609. Silver, XX. 296; VI. 498; XV 66, 113, 234—assaying of, III 770—standard sterling silver of Great Britain, VII 72 -supply of, in early ages, 188-influx of, from America, 189-decrease in the supply of, for some time subsequent to 1810, 191-its value in the early part of last century, 378-process of coining, 86 -melting, 87-variations of the standaid, 72-relative proportions of silver to gold, 78—amount coined at the Royal Mint 95—specific gravity of, XII. 88— ductility of, X. 702—beating of, 703 extracted from lead, XVII 622, process of, ib; XV 234—held in solution in sea-water, XVII. 572-distribution of, 622—in galena, XIII. 299—use of, as money, XV 417—coins of, 421 et seq. 443; XVI. 352 et seg -debasement of, XIV. 428-some of its salts poisonous, 434—red, XV 121—bismuthic, ib.—plating with, XVII. 783—why less valuable than gold, XVIII 241—cohesion of, XX. 756. See Precious Motals.

- fii, XVII 757. Silver-mines, XV. 284—in America, II. 705—Burmah, V. 779—Bolivia, 825— Chili, VI. 548, 550—Hungary, IV 313; XII. 17-Japan, 689-Mexico, XIV. 715 —Europe, IX. 887—Norway, XVI. 822 —of Pasco, XVII. 471—Peru, ib — Puno, XVIII. 695—Russia, XIX. 542, 548—Siberia, 550—Spain, 489; II. 600 -what benefit accrues to a country from colonics possessing them? VII. 145 - silver found in England, 77, 407, 763; XV. 234-in Scotland, XIX. 804; VIII. 238; XIII. 175—Ireland, XII. 507. Silverphyllinglanz, XV. 117.

Silver's marine governor, XX. 653, 654. Silversmith, X. 705.

Silvius, genus of insects, IX. 231. Simarubacese, nat. order of plants, V

SIMBIRSE, in Russia, XX. 296; XIX. 521. SIMEON (Charles), divine, XX. 296. - of Durham, XX. 296.

(Moses Ben), his Hebrew Bible, IV

Stylites, XV. 407.

#### SIM-SIN

SIMFEROPOL, town in Russia, XX. 296, II. 435: VII 504

Simiadæ, in zoology, XIV 137 Simiæ catarihini, XIV. 137-platyrrhini,

141 See Monkeys SIMILE, XX. 297, VII 219, XIX. 132. SIMLA, in India, XX. 297

Simnel (Lambert), XII 474; VIII 695 SIMON MACCABEUS, XX. 297; XII. 733, 770

(RICHARD), XX 297-his French New Testament, IV. 701-his Critical History of the Old Testament, XIX. 828

(Dr), on the thymus gland, XII

Sunon's Essay on Irish Coins, XV 435 SIMONIDES, XX. 297—invention of mnemonics by, XV. 285—inscription at Thermopylæ by, XX 500

Simons (Richard), VIII. 695. Simons wind, XIV 685—of Arabia, III.

342—of Egypt, VIII 422

Simosaurus, fossil reptiles, XVII 144 Sumplicimani, section of insects, IX. 90, 92, 93

Simplicipedes, section of insects, IX 96,

Simplicity, in poetry, XVIII 95.
Simplicity, XX 298.
Simplon, XX 298, H. 624—Benaparte's road over the, ib., n., XIX. 228

Simpson (General), XIX 509, 510-on the designs of the Russians in the battle of Tchernava, 509

(Piof), his experiments on the growth of plants, IL 316-chloroform as an anaesthetic first proposed by, VI

(THOMAS), XX 298-questions in physical astronomy solved by, I 694on annuities, III 221, XII, 397—on mortality, XV 632—os probability, XVIII. 591-his rules for finding the areas of plane surfaces, XX. 140 et seq - (Thomas), his Arctic expedition,

XVIII. 171, 172.

Simson (Archibald), VI. 72 - (Dr Robert), XX. 298; I. 698, and n. 1—problems of Apollonius restored by, III. 302—on Euclid's porisins, XVIII. 361

Simulia, genus of insects, IX. 229 Sin, original, XVIII 477-nature of sin, XXI 199-all men under, 198-principle of, 200-kinds of, 192-no mere man has the power to forgive, I 498-imputation of Adam's sin to lus posterity, XXI. 204, 205, 207.

wilderness of, XX 302 SINAI (Mount), XX. 302-inscriptions near, XVII 535-library of the convent of, XIII. 428-height, XVII. 644-dates of, VIII. 431-the law given from, XV.

Sinaloa, in Mexico, XIV. 727, 718. Sinclair (George), on the barometer, IV. -works of, ib., n -on the pressure

of the atmosphere, XVIII 27.

— (Sir Jorns), XX. 203—on training, VIII. 25—his connection with the Board of Agriculture, 11. 265.

SINDH, Indian province, XX. 303—Sepoy revolt in, XVI 812—annexation of, V. 4 Sinendrij, Persian town, XX. 307.

Sines, arithmetic of, IL 547-nature and calculation of, XIII. 565. Sinew, II. 828. See Tendon.

Sinfulness of man, sources of, XXI. 201; consequences of, 207.

Sing-Sing, penitentiary of, XVIII. 571. SINGAPORE, XX. 306-trade of, III. 757silver exported from England to, XVIII -weights and measures, XXL 813.

Singer (Mr), on the electricity of powders, VIII. 564-on the fusion of wires, and oxidation of metals, by electricity, 592, 598-on the revival of oxides, ib .- on the effects of electricity on gases, 597his electrometer, 617-his electric pile. XXI. 619.

Singhalese, VI. 391, 398-language, 397. See Ceylon.

# SIN-SIT

Singing, XX. 307; XV 703; embellishments in, 719-singing-birds, XVII 633 Single-entry, book-keeping by, V. 28 Singlestick, game, XI. 170 Sinicaglia, town in the Papal States, XX. 307. XVII 241—fair of, IX. 469

SINISTER, in heraldry, XX. 307; XI 327. Sinkai, lake in Sumatra, XX 802, 803. Sinkel, river in Sumatra, XX, 803.

Sinking fund, VIII. 752; X. 328—Pitt's plan of a, V 439; XVII 736—Wal-pole's bill, XXI. 692

Sinna, town in Persia, XX 307. SINOPE, XX. 307-port of, IV 744-destruction of the Turkish fleet at, XIX. 501. XXI 375.

Sinopite, mineral, XV. 84 Sinter, siliceous, XV 69, 144-pearl, ib Sintoos, Japanese sect, XII. 694 Sinuessa, ancient Italian town, XX 308.

Sinumbia lamp, XIII 171. Sinus, in anatomy, III 30—variable size of the frontal, XVII. 567 and n—much developed in some of the mammalia, III. 74 79-in what fistula differs from IX. 650-in veterinary science, XXI 558.

Sion, Swiss town, XX 882. - College, VII 115.

Sionitas' translation of Edrisis' Geography, VIII 411.

STOUT, XX. 308; VIII 505 Sioux, American tribes, IX. 347-languages, XIII 223.

SIPHANTO, Island, XX 308 Siphon, XII. 82. See Syphon. Siphona, genus of insects, IX 245. Siphonostomata, mollusks, XV 384 Siphonostomus, genus of fishes, XII 315. Siphonotreta, fossil mollusks, XVII 105. Siphonotus, genus of mollusks, XV 372. SIPONTUM, ancient Italian town, XX 308.

Sinunculida, zoophytes, XXI 984. Sipunculus, zoophytes, XXI 985 SIR, title, XX 308-applied to clergymen, XIII 114

Strand (A.), his work on bees, IX. 23 SIRLLINUGGUR, town in India, XX 308. Siren, reptile, XIX 14, 81, XIII. 460-odontology of, XVI 430.

Surene, instrument for enumerating sounds,

Sucuida or Sirenoids, family of fishes, XII 318.

SIRENS, In fable, XX. 308 Sirex, genus of insects, IX. 184. SIRIIND, in India, XX. 309. SIRINAGUR, XX. 309 See Cashmere Siris, city of Magna Gracia, XX. 309. Sirius. See Dogstar

Sirmarks, in ship-building, XX. 184. Sinmour, in India, XX, 309. Siro, genus of arachinides, III 387 Sirocco, XX, 309, 247; XIV. 470; XI.

14; XII 414—electrical state of the air during, VIII. 579. Smons, town in India, XX. 309. Sirven, aided by Voltaire, XXI. 661.

SISEBOLI, in Turkey, XX. 309. Siskin, bird, AVI. 761. Sismondi (J. C. Leonard Simonde de), XX. 309-on Machiavelli, I. 234-on

taxation, XXI. 57. Sisor, genus of fishes, XII. 263. Sisson (Rev. J. Lawson), his photographic

process, XVII. 548. Sisson's optical instruments, III. 808. Sissoo wood, XI 444.

Sisteron, in France, XX. 310 Sistine Chapel, XIV. 738—Angelo's painting of, XVII. 64, 66.

Sistova, in Turkey, XX. 310; VII. 653. SISTRUM, musical instrument, XX. 310. SISTPHUS, in fable, XX. 310. Sitana, genus of reptiles, XIX. 33. Sitang, river, XXI. 151.

Sitaris, genus of insects, IX. 136. Sitfasts, in horses, XXI. 579. Sitka, meteorological observations at, XIV. 687.

Sitkoki, Japanese island, XII. 688. Sits, in coal-workings, VII. 122. Sitta, genus of birds, XVI. 768. SITTINGBOURNE, town in Kent, XX. 310.

# SIU-SKU

Siu-an-noa, Chinese town, XX. 311. Siva, Hindu deity, V 267, XI 468 Sivas, in Turkey, XX. 311. SIVASH, XX 311

Sivatherium, fossil mammals, XVIL 173, 598.

SIWAH, XX 311, II. 718.

Six (Mi), on dew, VII. 769—his register thermometer, XI 724; XXI 224. SIXTUS V (Pope), XX 311.

IV. (Pope), his improvements in Rome, XIX, 366, 367. SIZAR, XX 312-at Oxford, XXI 456.

Sızarshıps, XXI. 488 Size of organs, in phrenology, XVII 564

Sizing of paper, XVII 256, 258, 259—gold size, X 703—in weaving, XXI 784. Skagei-tack, IV 402, 403, 404.

Skaife (Thomas), his pistolograph, XX 691, XVII 554

SKALITZ, town in Hungary, XX 312. Skaptaa Yokull, eruption of, in 1783, XII. 198-quantity of lava ejected by, XVII 589.

Skates, fish, XII 325, 326, IX 763. SKELLTON, XX. 312; III. 4-of the lower animals, 74—fishes, XII 208, 210 and n, 211 and n -of msects, 13 30-cleaned by exposure to ants, III 263

Skeligg islands, XIII 73. Skelly, fish, XII 256.

SKELTON (John), poet, XX. 312. SKENE (Sir John), lawyer, XX. 313

- (Loch), VIII. 2J8. SKERRES, Itish scaport, XX. 314; VIII 215-islands, fb

- in Shetland, XX 113 Skerryvore lighthouse, AlII 467-force of waves at, XI 216.

SKEW BRIDGE, XX. 314, 729; on railways, XVIII 762

Skey, on muscular filament, II 821. SKIBSERLEN, town in Ireland, XX. 315 Skiddaw, VII. 576, 578; AVIL 643-slates of, XV 196.

Skin, structure of the, II. 834-painted by the North American Indians, 682-cellular tissue under the, 786-its connection with the mucous membranes, \$38 -differences of its complexion, 222-alleged cause of its black colour in the negro, Il 835-seat of its colour, VII 223; XVII 667-excretion from, ib .- of the crustacea, VII. 537-of the cetacea, XIV. 238-as a manure, II. 407-diseases of the, in the domestic animals, XXI 578

SEINNER (John), XX 315. Skins, imports of, into the United Kingdom, VIII. 735. See Leather, Hides. Skipetar, or Albanians, IX. 351.

Skipper, fish, XII, 264. SKIPTON, town in Yorkshire, XX. 316-fairs at, XXI. 958—castle, 959 Skirnet, V. 195—culture of, AI. 740.

Skirtings, in joinery, V. 750, 751, XII 809, 812,

Skleroklase, mineral, XV. 119. Skolopsite, mineral, XV. 75 Skrimshire (Mr), on the phosphorescent

effects of electricity, VIII. 598. Skua, bird, XVI 813.

Skull (human), III. 15-general description of, 29-of the indigenous Americans, II 676-distinguished by its spheroidal shape and great size, 775; III. 28—shape and dimensions at different ages, 29-forms in different nations, ib. -Daubenton's occipital angle, 79-Caniper's facial angle, ib .- Cuvier's method of estimating the proportion of the face and, 80-of the aborigines of Australia, IV. 259-Oken's vertebral theory of, XVI. 499, 501-how far correspondent in shape with the brain, X. 383; XVII. 673, 674-organs of the faculties marked out on, 562-amount of fluids contained in, 698-artificial flattening of, IX. 348 surgical treatment of fractures of,

of mammalia, III. 77; XIV. 133 birds, 84-reptiles, 87-fishes, 90; XII.

# SHU—SLE

210-not filled by the brain in some animals, III 104

Skunk, quadruped, XIV. 158-its fur, X 348

Sky, colour of, XVI 691-instrument for measuring the intensity of its colour, VII 606, XVI 692, XIX 653-cold from a clear sky, VII. 101 See Cli-

Sky-rocket, XVIII 707.

SKYE, island, XX 316, XI 278, 279— Michaelmas custom in, XIV, 736. Skyros See Scyros

Slabber, discovery of the metamorphosis of crustacea by, VIL 544 Slacks, in Londonderry, XIII 680.

Slag, in mortar, XX. 714

SLATHWAITE, in Yorkshire, XX. 317.

Slaking of line, XX 713. SLANDLE, XX, 317

Slane, in Meath, pagan relicts near, XIV.

Slaney, river, XII 505.

Slate, XV 142, 153, 155—slaty cleavage, 154, 179, XVII. 620—lead found in clay-slate, AV. 213-specific gravity of, XII 88—slate-clay, AV. 83—pelishing, 69—adhesive, 1b—100fing slates, AIA. 374—different kinds of, V. 746

Slate-pencils, XVII 376 Slate-quarries in Butain, V 746-Caernarvonshire, VI 54—at Bi nam, Perth-shire, XVII 456—of Penrhyn, 620— Hebrides, XI. 278-Merionethshire, XIV. 543—Dumbartonshue, VIII 235. Slateford, aqueduct at, III. 339

Slaters' work, V. 745-measurement of, 746-on a farm-steading, II 373. SLAVE LAKE, (Great), XX. 318; XVIII.

172 Slave-coast, II 227; XI 88, 89.

Slave-trade, XX. 321-African, II. 219, 227-South American, 693-discoveries in Africa extended by, 210-opposition to, in Britain, V 533, 538, 540, by the Quakers, 527; XVIII 722—its abolition there, V. 600-compensatory grant to Spain, 623—convention on, X. 104— Liverpool's participation in, XIII. 518— Bryan Edwards on, VIII 414-opposed by Roscoe, XIX 417; and Wilberforce, XXI. 865—in Nubia, XVI 348—Constantinople, VII 302—first publicly condenned by Dominic Soto, I 330. See Negroes

SLAYLEY, XX. 318, 324—In Afghanistan, II. 206—Brazil, V 295—Colombia, VII. 134—Hayti, XI 255—India, 472 and n. 1 — Jamaica, XII. 674—Java, 708 — Russin, XIX, 523—United States, XXI. 430, 439-Virginia, 599-early abolished by the Danes, VII. 746-abolished in Bolivia, in 1836, IV. 837 - American States in which it does not exist, IL. 707-recent discussion on, in America, XIII. 42-Aristotle's view of, III. 569-Lord Exmouth's expedition to Algiers for the suppression of, V. 621-resolutions of the House of Commons in 1823 for improving the treatment of slaves, 639 - proceedings in 1824, 641 -- sanctioned by Islamism, XV. 304—act for the abolition of, in all the British colonies, V. 064-its influence on the Athenians, XX, 371-Wilber force's exertions for the abolition of, XXI. 865—Washington's views of, 754; his emancipation of his own slaves, 764.

SLAVONIA, kingdom of, XX. 327; XII. 9. Slavonians, IV. 318, 320; X. 587; X11. 10, 11; XIX. 469, 522—their historical writers, XI. 547.

Slavonic language. See Sclavonic. SLEAFORD (New), in Lincolnshire, XX.

Sledge, in Lapland, XIII. 240 - sledge racing in Russia, XIX. 545. See Sleigh.

Sleeman on Oude, XVII. 15, 16, 18. Sleep, XVII. 680—mental phenomena of, XIV. 583-time that should be given to, XIX. 612—less aliment needed during, III. 180—supposed sleep of plants, V. 108. See Dreams.

# SLE-SME

Sleep-walking See Somnambulism Sleepers, in railways, XVIII. 754, 756-58 SLEIDAN (Johann), historian, XX 328. Sleigh and Sleighing, in Canada, VI. 139,

SLESWICK, XX. 328 See Schleswig Sleuthounde See Bloodhound Slidderyford, pillars at, VIII. 123. Slide-rest, for turning lathes, I. 879. Slide-valves of steam-engines, XX. 589, 596, 654,

SLIDING-RULE, XX. 328. Sheve Bloom Mountains, XIII. 91, XVIII.

729, 729 Donard, mountain, VIII 122 Shevenamanagh Mountains, XXI 285 Slight (James), his Report on Bell's Reaping Machine, II 276

SLIGO, Irish county, XX. 328-statistics of, XII 516, 517 \_agrıcultural

- bay, XX. 332 Sling, its employment in war, III 425, 426. Slingeby (Sir Robert), his work on the navy, XX. 130

SLINGELANDT (Peter Van), painter, XX. 332

Shps for hauling up ships, VIII 77. SLOANE (Sir Hans), XX. 332, XIV 462, -purchase of his library for the British Museum, XIII 389-Sloane MSS, 391-on binds, XVI. 726-Petiver's col lection of plants purchased by, XVII. 495-on the Physales, XXI, 999

SLOBODSKOI, or Slobosk, in Russia, XX 334

Sloe, XVII 760

Shorin, town in Russia, XX 334 Shoth, quadruped, XIV. 190; XVII 631— odontology of, XVI 441—bones of the foot, III. 82, 83-stomachs, 108-intestines, 110-tooth of the three-toed, XVI 411, 412, of the two-toed, 441-fossil

sli, 212, or the two-tood, 441 sloths, XVII. 173, 637.
SLOUGH, XX. 334.
Slowaks, XII 11. See Slavonians.
Slow-worms, XIX. 41.

Slubbers, wages of, in Leeds district, XXI

Slubbing billy, XX. 510.

Slugs, XV. 374. SLUICE, XX. 334—diminution of discharge through a, XIX. 189-in irrigation, XII. 613

STUTER, town in Russia, XX 334. Smalcald, league of, XIX. 824; articles of,

Small (Dr), of Birmingham, his services

to Watt, I. 868, n 1. Small's plough, II. 270. Smallpox, death from, XV. 604—Syden-ham's treatment of, XX. 895; XXI. 500.

Smaltine, mineral, XV. 115. Smaridia, genus of arachnides, III. 388.

Smaris, genus of fishes, XII 288.
Smart (Christophei), XX 334.
(John), his tables of interest, &c.,

XII. 433.

Smearing of sheep, IL 351. Smeathman (Henry), his work on white ants, IX, 11, 179, 180.

SMEATON (John), XX. 335-his boring mill, -his improvements on the diving bell, VIII. 64—on hydrodynamics, XII. 113, 121, 140—on water-wheels, 164, on waves, XI. 216-his air-pump, XVIII. 37, 38—on the velocity of wind, 65-pyrometer invented by, 702-Eddystone Lighthouse erected by, III. 491; XIII. 464-his improvements on the steam-engine, XX 575-his great Chasewater engine, 1b.—his steam-boiler, 588. Smeck (Magnus), king of Sweden, XX. 845.

Smectymnus, VI. 65; XV. 25.

Smee (Alired), his chemico-mechanical battery, XXI 618—on multiplication of works of art in metal by voltaic electricity, 635, 636-on voltage etching, 636, 637-on printing bank-notes from electrotypes, VIII. 810, n. 2.

Smell, sense of, in man, XVII. 677; XIV. 568-acute in the Arabs. III. 348-in the lower animals, 178; ants, 262; bees,

### SME-SMI

IV 575, insects, IX. 78, fishes, XII. 220 — organ of, in man, III 42, in brutes, 94 (see Nose)—smell of minerals, XV 60

SMELLIE (William), XX. 336-his notice of Adam Smith, 343 and n 3, 345—his connection with Gilbert Stuart, XXI 783 Smelt, fish, IX 763

SMELTING, XX. 337-of iron, VI 178, 179, 489; XII. 538 et seq—by hot-blast, 544; XIV. 546—fuel for, XII 542—of tın, XV 241-at Newcastle, XVI 167

See Copper-smelting
Smerdis, genus of fossil fishes, XII 343,
XVII 127.

Smerinthus, genus of insects, IX 210 Smethwick's burning-glasses, VI 10. SMIEINJORSK, in Siberia, XX. 337 Smilaceæ, nat order of plants, V 210. Smiles (D1), his Life of George Stephenson,

Smilis, Greek sculptor, XIX. 852 Smith, the most common surname in England, XVIII 836

- (ADAM), XX. 337—his theoretical system of philosophy, I 3-on the ancient Greek philosophy, 9-on the law of nations, 91—on French meta-physical writers, 172 and n 3—his dissertation on language, 175, 176, n 1—his Theory of Moral Sentiments, 374 his theory of sympathy, 375, 376, 377his objections to apprenticeship, III 326-his friendship with Dr Black, IV. 738-on metal as a medium of exchange VII 68-on the high price of gold before the recoinage, 79-on monopoly of the colonial trade, 141, 143, 144-on labour, 162—on the value of gold and silver in the early part of last century, 378—on division of labour, 429—Lord Hailes' Latin version of his account of Hume's last illness, 636-on exchange, IX. 431—on interest, XII 429—on the origin of language, XIII 188, n—on money, XV. 416, 437—on the Bank of England, 470-his theory of rectitude, 545—on joint-stock companies, XVII. 316, 317—on wealth, XVIII 211—his Wealth of Nations, 222, effects of its publication, I. 374, its prohibition in Spain, IV 713—on capital, XVIII 232, 233-on desire to better our condition, 234-on the productiveness of agriculture, 236-on retail dealers, 237-on value, 239-on wages, 240-on productive and unproductive consumption, 257 on primogeniture, 516-his opinion of Quesnay, 733-on taxation, XXI 38, 43 et seq.; his maxims on, 40; on the tax on wages, 49

- (Dr Archibald), on Peru, XVII. 470, 471, 472.

(Assheton), his hounds, XI 767. (Captain Baird), on Italian iriigation, XII. 140.

and Beck (Messrs), their objectglasses, XIV. 779, 780—their stereo-scope, XX. 687, 688.

and Coventry, their steam-boiler,

\_\_\_\_ (Charles), on the corn produced and consumed in the United Kingdom, VII 395-on the corn-trade, 379. (Charlotte), XX. 837-her novels,

XIX. 279. - (Dr), his microscope, XIV 786.

(EDMUND), XX. 346. (F), his works on insects, IX. 19. (F. P), his experimental scrow-vessel, XX. 187, 689—his screw-propeller, 658

- (Dr Gordon), on forensic medicine, XIV. 424.

(General Sir Harry), his victory over the Sikhs, II 583—his proceedings against the Kafirs, XIII. 34, 85; X

James), of Deanston, his system of draining, II. 264; VIII. 133—his subsoil plough, II. 271—machinery erected by, at Shaw's Water, XI. 46. (JAMES and HORACE), XX. 846.

# SMI-SNI

SMITH (Sir James Edward), XX. 346—his herbarium, XVI 334

- (John), of Cambridge, on the immortality of the soul, I 58, n. 1-passages from, illustrative of the Cartesian philosophy of the mind, 61, n. 2

(John Pre), divine, XX 347—on the Deluge, VII. 723—on the dispersion of mankind, VIII 45

(JOHN THOMAS), XX 348 (JOSEPH), Mormonist, XX. 318, XV. 589 (Sir Lionel), governor of Jamaica,

XII 674 (Nicholas Hankey), on breeding

horses, XI 636 (Rev M1), of Lois Weedon, his system of growing wheat, II 293; partly

a revival of Tull's method, 308 (Rev M1), missionary, case of, XX

— (Sr Sidney), his defence of Acre, V. 568, X 112; VIII 489
— (Sydney), XX 348—on Francis Hoiner, XI 632—on the origin of the Edinburgh Review, XII. 716

—— (Dr Southwood), his efforts in fa-vour of sanitary legislation, XIX, 603 - (Dr Thomas), on feudalism in Turkey, IX. 521.

(Sir Thomas), XX 350. (William), geologist, XX. 351 (Dr William), his Lexicon, XVII

(Rev William), on British diatomaceæ, III 212. Smith's bellows, IV 795-anchor-smiths,

TTT, 119.

work, in building, V 756. Smithsomie, mineral, XV. 100 Smithy coal, VII 118 Smits (Edward), on the population of the Netherlands, XV. 620, 634

SMOKE, XX. 352—injury to the health of towns from, XIX 605—Smoke Nuisance Abatement Act. 1b

Smoke-balloons, II. 171, 172. SMOKE-SAIL, XX. 359.
Smoking, fashion of, IX 487.
mountain, XVIII. 338.

SMOLENSK, in Russia, XX. 359, 360, XIX 521-Napoleon's capture of the city, X

155—his retreat from, 158.

SMOLLETT (Tobias), XX 360—character of his novels, XIX. 273—on the feudal system in the Highlands, IX. 521, n 1 Smolts, III 152; IX 591, XII 239—their conversion into grilse, IX 596. SMUGGLERS, XX. 363; XXI. 70.

Smuggling, encouraged by indirect taxes, XXI 58; and high duties, 69-reduction of these the only means of preventing, 70—in Spain, XX. 491. Smut, disease of wheat, V. 171, 172.

Smynthurus, genus of insects, IX. 261. Smyrna, XX. 363—probable burth-place of Homer, XI 595—raisins of, XVIII. 799 -trade of, XXI. 385.

Smyth (C P), astronomerroyal of Scotland, III. 818, 819—his meteorological observations on Teneriffe, XIV. 657, 676, 680, 685—on zones of vegetation on the Peak of Teneriffe, XVII 625.

—— (Admiral), on the Mediterranean, XVII 573, 574—Neapolitan coasts, XX. 241, 242, 244 atmospheric phenomenon described by, 246

nails, XV. 373, 374, 368. Snake. See Serpents Snake-root, V. 183—Virginian, 205. Snap-fishing, III. 159.

Sneedorf (Jens S), XIX. 693 SNEEK, town in Friesland, XX. 864.

SYELL (Willebrord), XX. 364; X. 504—his measurement of an arc of the meridian, L 618; IX 548; III. 801-his discover of the true law of refraction, I. 627, 747; IL 87; XIII. 449; XVI. 530—his trea-tise on navigation, 5—on the quadrature of the circle, XX. 528.

Snelling, on coinage, VII. 75. Sniadecki (Andrzej), XX. 864. - (JAN), XX. 864.

# SNI-SOC

Snipe-fish, XII 209 Snipe-shooting, XX. 223 Snipes, XVI 803

Snoirco Sturieson, XX. 364; XIX 689— Edda of, 690, VIII 388, Rask's edi-tion of, XVIII. 808

Snow, XX. 365, XIV. 659—exportation of, from Ætna, II. 190, VII 101—cooling with, ib—depth of, in Canada, VI 140-its influence on rocks, XV 139perpetual snow, XVII 602-hne, or level, of perpetual snow, XIV 659, X 633; among the Alps, II 625; of the Tytol, X 585, on the Andes, II. 669, XVII. 602, in Mexico, XIV 716, Himalayas, XI. 442, VI. 772, Pylenees, XVIII 700, XX. 486—red, XI. 43—red snow plant, V 75—green-snow plant, 143 See Glacier, Polai Regions.

Snow-drop and snow-flake, plants, V. 212 Snow-diop tiec, XVII 764

Snow-flower, Virginian, XVII 764 Snow-skates, XIII 240

Snow-spectacles, XIV. 800.

Snowdon, Welsh mountain, XX. 365; VI. 54-barometrical measurement of, IV. 466-height, XVII. 643

Snuff, XXI 295-manufacture of, 296, 297 -at Sheffield, XX 96

Snuff-boxes, manufacture of, at Cumnock, VII 584, Mauchline, XIV. 359.

Snuff-makers, diseases of, XIV. 443 -license paid by, XIII 435

Sny, in ship-building, XX. 185 SNYDERS, or SNEYDERS (Francis), XX. 365; XVII. 75

Soaking of timber, XXI 279.

Soap, XX. 865—knowledge of, in ancient times, VIII. 273—license paid by makers of, XIII 435-rosin used in making, XIX. 88-manufacture of, in Franco, X. 255

Soap-bubbles, colours of, XVI. 602-solid bubbles, 603. Soapstone, XV. 84

Scapwort, order of plants, V. 186

Sonr, river, XIII. 320. SOBIESKI (John), XX 367; XVIII. 141 the Turks defeated by, XXI. 370-his residence, 733

Soboles, in botany, V. 79. Sobiaon, battle of, V 670, XVIII 693 Sobnety, a virtue of the Chinese, VI. 595. SOCAGE, XX 367

Socialism, denounced by Tocqueville, XXI. 300. See Communism.
Society, origin of, XIII. 255—science of,

263-duties connected with, XV. 569changes in English, VIII. 761. See Caste, Rank.

for promoting science, &c., XX. 367 -advantages arising from learned so-cieties, I. 47—societies in London, XIII. 674; XX. 868; Edinburgh, ib; Dublin, ib.—Aslatic, III. 759; VI. 70—friendly societies, X. 309—anti-slavery societies, XX. 321; in United States, II. 43— Pythagorean, XVIII. 712. See Academy, Bible Societies, Royal Societies,

ISLANDS, XX. 368; XVIII. 279— bread-fruit of, V 300 Socinians, XX 369; XII. 764—views of

some of them on original sin, XXI. 204, respecting the person of Christ, 208. See Socinus.

Soornus (Faustus), XX. 368. - (Lælius), XX. 368. Sockna, town in Fezzan, IX. 527. Soconusco, town in Mexico, XX. 869. Soconno, town in New Granada, XX. 869.

SOCOTEA, island, XX. 369; II. 229.
SOCRATES, XX. 369; XVII. 783 et seq.—
his mode of teaching, 785, 786—his method of reasoning, I. 17, n—his answer to those who maintained that the superiority of the soul of man to that of a brute arises from superior organisation, 180—a teacher of virtue rather than a searcher after truth, 316-Plato's account of his doctrines, ib .- his descrip-

#### SOC-SOL

tion of a tyrant, 317-on the opinion of men as to a future state, 460-Eberhard's defence of, VIII 369-Aristophanes' ridicule of, 139-poison which caused his death, XI 311—his ideas on beauty, IV 537—his dæmon, III 310 cause of his condemnation, IV. 216-Xenophon a disciple of, XXI 950

SOCRATES, of Constantinople, XX 404 SODA, XX 404, VI 485; XV 65, 61-in plants, II 387—poisonous quality of, XIV 434—manufacture of, at Newcastle, XVI 167—nitrate of, as manure, II. 305, 413-salts of, as manure, 413silicates, ib

Soda-alum, II. 636, 638; XV 97

Sodalite, mineral, XV 74
Sodium, VI 485, XV 60, 61—Davy's discovery of, VII 669—specific gravity of, XII 88

SODOR, XX 404; XVII 187, 192 SODOR, XX 404—bishopine of, XIV. 246 Soemmening (S Thomas), his anatomical works, II 769, III 73—spot on the eye named after him, 41-on the form of the eye, 95

SOERABAYA, IN JAVA, XX 401 SOERKARTA, IN JAVA, XX 404. Soest, town in Piussia, XX. 404 SOFALA, in Africa, XX. 405, II. 228; XV 670

Soffeism, XV 304. SOFFITA, XX. 405, III. 513—to find the soffit of an arch, XX 729-moulds for

th 730 Soria, XX. 405. See Sophia. SOGDIANA, in Central Asia, XX. 405; V

759. Soho, near Birmingham, IV 732; V. 246.

Sourau, town in Silesia, XX. 405. Soignns, town in Belgium, XX. 405 Soil, XX. 405, II 266; XV 150, 216—

chemical and physical proporties of, II 389, 392, 397, V 97—origin of, II 389 —mechanical improvement of, 399 classification of soils, ib, 266-improvement of, by burning, 401-mixing of, ib -a source of the organic constituents of plants, 376-adapted for flax, 332preparation of, for turnips, 315—comparative extent of useful soil in the Old and New Continents, 709-influence of, on the distribution of plants, V. 221 effects of dialnage on the temperature of, VIII. 131—of gardens, XI. 700, 747—for nurseries, XVII. 766—power of producing food limited by the nature of, XVIII. 339-its full resources have nevel been called forth, 345—its influence on health, XIX. 610—of the tea-lands in China, XXI. 84—influence of, on the growth of timber, 268, 269of England, VIII 717 - Russia, XIX. 518 See Mould, Subsoil

Soiling of live stock, IL 326. Soissons, town in France, XX. 405.

Sokoto, XI. 777, 778. See Succatoo. Solan-goose, XVI. 814, IX. 762; III

Solanacese, nat. order of plants, V. 201their narcotic properties, XIV. 437; XXI 293.

Solander (Dr), IV. 419.

Solar system, stability and permanence of, I. 811-solar heat, 950. See Astronomy, Heat.

- microscopes, XIV. 789-time (see Time).

Solario (Antonio de), XX. 405. Solarium, genus of mollusks, XV. 382-fossil, XVII. 110.

SOLDER, XX. 406.

Soldiers, diet of, VIII. 22-utility of training to, 25-diseases of, XIV. 442-interment of, among the Athenians, X. 844. See Army.

Soldin, town in Prussia, XX. 406. Sole, fish, XII, 272-fishery of, IX. 649; in Ireland, 634.

- of windows, III. 512. Soles, genus of fishes, XII. 272—fossil, XVII. 128. SOLECISM, XX. 406.

# SOL-SOM

Solecurtus, genus of mollusks, XV. 350fossil, XVII 108

Solemya, fossil mollusks, XVII 106 Solen, genus of mollusks, XV. 350, 317 Solenella, genus of mollusks, XV 349-fossil, XVII 106

Solenellidæ, family of mollusks, XV 349 Solenhofen, hthographic stones of, XIII 510—fossil msects and spiders of, XVII. 103

Solenidæ, family of mollusks, XV. 350-fossil, XVII 108

Solenodon, teeth of, XVI 451 Solenognathus, genus of fishes, XIL 315 Solenostomidæ, family of fishes, XII 315

Solenostomus, genus of fishes, XII 315 SOLENT (The), XX 406 Solenus (Julius), on geography, X 468. Solesmes, town in France, XX 406.

SOLEURE, XX 406, 408, 882 SOLFA, XX 406

Solfataras, XVII 621 -- mountain near Naples, 1b , XII 637 Solfinino, village in Lombardy, XX 406

-battle of, in 1859, XIX 645

Sour, in Asia Minor, XX 106. Solicitor, XX 406—qualifications of, IV. 219-in the supreme courts, VIII. 395

Solid, definition of, X. 506, 507, 535—geometry of, 532—motion of a rigid solid, XIV 387. Solidipeda, II 774

Solidity, perception of, XIV. 573 - a primary quality of body, 571

Solids, mechanical properties of, T 874application of force to, ib -refractive power of, XVI 558-dispersive powers of, 582-colours of dispersed light in, 693

Solidungula, family of mammals, XIV. -their bones, III 77 et seg muscles, 92-organs of smell, 94-ears, 98-organs of voice, 101-nervous system, 104-teeth, 106-length of their intestines, 110

Solidus, com, XVI 386 Solier (M), his writings on insects, IX 18 Solierith, town in Warwickshire, XX 406. Soliman II, the Magnificent, XX 406, XII. 15; XVIII 383, XXI 369.

Solingen, Pinssian town, XX. 407. Solis (Antonio de), historian, XX, 407, Solitaire, extinct bird, XVII 634, 637. Solitaria, tribe of mollusks, XV. 332.

SOLITARIES, XX 407. Solitary system, in prison discipline, XVIII. 571.

SOLLER, scaport of Majorca, XX. 407. Solly (Mr), on the brain, XVIL 560, 668, 669.

Solly's Syllabus of Logic, XIII 585. Solo, in music, XX 407 - Javanese river, XII 703.

Solofia, town in Naples, XX. 407. Solomon, XX 407, XII. 767, XVII. 193—aqueduct of, III. 333—Proverbs of, XVIII. 643—the probable author of Ecclessastes, VIII. 372—psulms composed by, XVIII. 679—templo of, III. 439; XII 740; alians in, II 631
— Song of, XX 407, VI. 198.

—code, 105—travels, ib.—legislation, 213—Calendar, VI. 79—conversation with Crosus, VII. 507.

Soror, island, XX. 408. SOLOTHURN, or Soleure, XX. 408, 882. SOLOTHURN, or Soleure, XX. 408, 882. SOLOTHOR, XX. 409; VIII. 237—manufacture of salt on its shores, VII

551, n. 1

Moss, hattle of, XIX. 775. SOLYMANIA, town in Kurdistan, XX. 409. SOMALPET, town in Hindustan, XX. 409. Somatoria, genus of birds, XVI. 817. Somauli, or Somali, African race, XX 409; II. 221, 222—country of, 228. Someon, town in Hungary, XX. 409. Somerled, XI. 279; XIX. 752.

SOMERS (John, Lord), XX. 409. - (Sir George), IV. 668.

# SOM-SOR

Somers' Islands See Bernudas. Somerset (Lord Charles), V 641, XIII 33.

(Edward) See Worcester, Maroms of

- House, London, XIII 669, III 485 Somersetshire, XX. 409—population and value of property, VIII. 754.

Someron, XX 411 Somerie (William), poet, XX 411—his poem, The Chase, XII 33

Somerville (M1s), I 922, n 1 - on the magnetic action of light, ib -on the Chemical 1238 of the spectrum, 1b—on the solar 1238, XIII 452, XIV. 12, XVI 595, 596—on heat, XI. 266—her work on the mechanism of the heavens, IX. 677-on thunder-storms, XVII 616 -on the flora of Australia, 629-distributton of insects, 637-her Physical Geography, 642.

(Lord), on the want of salt as a punishment, XXI 974 Somma, town in Lombardy, XX 412
——town in Naples, XX 412
Somme, in France, XX, 412 SOMMERFILD, in Prussia, XX 412 SOMMERES, town in France, XX 412. SOMNAMBULISM, XX 413, XVII. 680 See

Mesmer and Mesmerism SOMNAUTH, town in India, XX 446 Somner (William), antiquary, XX 446. SONATA, XX 446.

Sonderbund, XX. 887.

Sonderland (D1), proves by an ingenious experiment the identity of cow-pox and small-pox, XXI 502

SONDERSHAUSEN, town in Germany, XX. 446.

SONDRIO, town in Lombardy, XX. 446. Song, or Soane, Indian river, XX 446. Song, XX. 447—hunting songs, XII. J3 Songaria, in Asia, III 732. Sonna, supplement to the Koran, XV. 303;

XX 907. Sonnerat, his voyage to New Guinea, IV. 262-on buds, XVI 720.

SONNINI DE MANONCOURT (C N. S.), 118turalist, XX 417
Sonnites, Mohammedan sect, XV 306;

XX. 907, 908. Sonogla (M.), his work on insects, IA 15 Sonora, Mexican state, XX. 117; XIV. 727, 718.

SONSONATE, in Central America, XX. 447. SONUM, town in India, XX, 447, SOOLOO ISLANDS, XX, 447; XVIII 513.

Soosoo, cetaceous animal, XIV. 220. Soot, as a manure, II. 305-quantity produced in London, ib -extraction of am-

monia from, 722-as a dyestuff, VIII. Soothsayers, VIII. 54.

SOPHIA, Turkish town, XX. 447.

—— (Princess), XIX. 476. Sophism, XX 447; IX. 476. See Fallacy. Sophism, XX. 447, 370, 383, 384, 301; XVII. 795, 809-philology cultivated by the Sophists, 518-Plate's teaching distinguished from that of the, 797

SOPHOCLES, XX. 447-tragedles of, VIII.

Sophonisba, daughter of Hasdrubal, XIV. 834. Sophora Japonica, XVII. 762.

Sophron, XX. 449. Sopwith (M1), on the effects of lead vapour on vegetation, XV. 193, n. Sona, town of Naples, XX. 449.

Sorabian language, IX 392. Soræa, Egyptian deity, XI. 386.

Soranus, Ephesian anatomist, II. 754; SORATA, mountain, XX. 449; III. 129; IV. 822-height of, XVII. 644.

Sonau, town in Prussia, XX. 449. SORBAS, town in Spain, XX. 449. SORBONNE, XX. 449; XXI. 447. Sorby (Mr), his machine for producing

lamination, XV. 159, n.—on current-marks on rocks, ib.—on cleavage, 179. Sorcerer-fish, XII. 281. Sorcery, XIV. 422-Malebranche on, I. 75

See Magic.

SOR—SOU

Sordawalite, mineral, XV 82 Sorex, genus of mammaha, XIV. 150dentition of, XVI 451. Sorgho, XX 798

Soria, in Spain, XX 419, 450. Soirs, Egyptian derty, VIII 454. Soirtes, in logic, XIII 632, 633 Sonocaba, town in Brazil, XX. 450. Sorosis, in botany, V 139 Soriel, wood, V. 187 - common, XI 745-

French, ib Sorrento, town in Italy, XX 450, 240

Sorting of tea, XXI 85 Sosigenes, his improvement of the Calendar, VI. 77

Sosistratus, VI 284

Sosvitza, fown in Russia, XX. 450. Soteres, Egyptian king, XI 390.

Soteriology, XXI 184, 215 See Salvation. Sothic period, VI 670.

Soto (Dominic), I 330—first writer who condemned the slave-trade, ib

SOTTEVILLI-LES-ROULN, in France, XX.

Sonan nut, XVI 395.

Souben an (M), on polarisation, XVI 681 Sonehong-tea, XXI 86,

Soudalı mountains, IX 527

SOUDAN, in Africa, XX 450; II 211, 228; XI 776, XVI 267-languages of, II. 221.

Soulmangas, birds, XVI 769

Soul, nature and essence of, I. 57, III 172, 176, XIV. 567, 605, 619 and n 1—seat of, 567, n. 6—presumption of its immortality from the analogy of the laws of nature, 1. 58-Leibnitz on the, 128, 259-argument of Addison for the immortality of, 162 — futility of the attempts to assimilate the faculties of brutes to those of men, 179, 181-ancient opinions as to the nature of, III. 309-Aristotle on, 548-Athenian speculation concerning, IV. 211-Have brutes souls? V. 700-Di S Clarke on, VI 757-Dr Pryce, XVIII 711-Priestley, 514—argument for its immortality from its simplicity, XIV. 619, n. 1—opinions of the ancients as to its unmortality, L 463-transmigration of souls, AL 470; I 463—Plato's notions of, XVII, 807— Pythagoras' opinions, XVIII, 711—operation of the Holy Spirit on, XXI. 218 See Immortality, Future Life, Mind, Spirit.

Souleyet on the mollusca, XV. 327. Soulie (M. Frederic), XX. 450. Soulina mouth of the Danube, IV. 742.

Sonlonque, emperor of Hayti, XI. 257. Sourt (N. Jean-de-Dieu), marshal of France, XX. 450; X. 137 et seq., 207, 230 -his Spanish campaigns, V. 604-his opinion of Sir J. Moore, XV. 529-his invasion of Portngal, XVIII. 388-his operations in Spain and Portugal, XXL 821, 822, 824, 826,

Sound, XX. 451-nature of, II. 97-propagation of, 98; I. 892; XVIII. 70 -velocity of, through different media, I. 891; II. 101 - through water, I. 891; gases, II. 104—mathematical theory of the propagation of, I. 891—Chladni on, ib -- musical, 892; II. 107, 108; XV. 704-grave and acute, II. 109-beauty of, IV. 553-Lagrange on, XIII. 154transposition of sounds in languages, XVII. 539-of electric currents, XXI. 631. See Acoustics, Echo, Music, &c.

(THE), strait in the Baltic, XX. 451; IV. 402—current in, 403—dues pald at, VII. 740, 748; VIII. 641. Sounding at sea, XX. 451, 26; XV. 157—

machine for, 27-in the Atlantic, IV.

176.
Soup-making, IX. 766—portable soup, 767.
Sour, or Tsour, XX. 451. See Tyre.
Sour-Krout, IX. 760.
Sousal (M. A. de), V. 279.

— (Pero Lopes de), V. 279.
— (Thome de), V. 281.
Souterasi, hydraulic obeliek, III. 365. South (Sir James), his transit instrument, IV. 152-his equatorial, 155.

#### SOU-SPA

South (Robert), divine, XX. 451 Down sheep, II 346-wool of, XXI

905 et seq
Sea, XVII. 39—active volcanoes in, XXI 603 See Pacific Ocean

- Sea Islands. See Polynesia Sea Scheme, IV. 507; V 456, VXIII 331

South-Eastern Railway, IX 750; XIII. 67 -dividend in 1845, XVIII 786

SOUTHAMPTON, XX. 452, XL 203of, VIII 75—battle of, 690
— county See Hampshire
— in Massachusetts, XIV 340

SOUTHCOTT (Joanna), XX. 453 Southern (John), his experiments on steam, XX. 557

(THOMAS), dramatist, XX. 454, XXI 172—dramatic works of, VIII 164 SOUTHEY (Robert), XX. 454-his friendship with Coleridge, VII 109-his account of a meteorolite, XIV. 631-his poetry, XVIII. 126.

(Thomas), on wool, II 353, XXI 907.

Southport, village in Lancashire, XX. 456

Southsea, XVIII 377.

SOUTHWARK, XX. 456—Bridge, V. 361, XII. 588; XIII. 676; XIX. 11 - suburb of Philadelphia, XX, 456

XVII. 509

Soutewell, in Nottinghamshire, XX. 456 — (Sir Robert), his method of pre-serving flowers, IX 669.

SOUTHWOLD, in Suffolk, XX. 456-naval engagement with the Dutch in the bay of, V. 426

SOVEREIGN, XX. 456-coin, XV. 441, 430,

power, XIIL 259—proprietary right of, considered, XI 511

Sow. See Swine, Hog

Sowbread, plant, V. 203. Sowerby (Messrs), their works on mollusca, XV. 327

Sowerbya, fossil mollusks, XVII 108 Sowing, implements for, II 274 Sozomenus (Hermias), Historian, XX. 456. SPA, or Spaa, in Belgium, XX. 457.

SPACOAFORNO, town in Sicily, XX. 457 Space, XIV 561—Clarke's, Leibnitz's, and D'Alembert's views regarding the nature of, I 142 and n—Kant's notions respecting, 195, 280; XIII. 49—phienological faculty of, XVII 673—tempera-

ture of, L 950. Space-penetrating power of telescopes, I

840: XXL 128. Spadaite, mineral, XV. 80. Spadix, in botany, V. 112, 115.

Spafield rots, V. 625. See Ribera (José de). Spagnoletto

SPAIN, XX. 457; IX. 403-history of, XX. -statistics of, 484-writers on ethics, I. 330-academies of the Moors, II. 61 academies of painting and history at Madrid, 68, 69-Royal Spanish Academy, 71 - agriculture, 253 - war with the Algerines, 567, with the Almoravides, 602—colonies in America, 700—popula-tion of Spanish America, 708—pointed and Moorish architecture, III. 449-influence of the Italian school on the architecture of, 453—army, 642—painters, 712; XVII. 75—Bibles, IV 701—relations to Britain in the reign of James I, V 386, 387-Gibraltar taken by the British, 448—War of the Succession, ib; IV. 303; XII 652-Quadruple Alhance, V. 455—wars with Britain, ib, 456, 458, 465, 559, 598—war with Portugal, in 1762, 465—disputes with Britain about the Falkland Islands, 470; and Nootka Sound, 536-Peninsular war, 603-negotiations with Britain, in 1823, 637—conquests of the Carthaginians in, VI. 281, 292, 293; XIX. 310—Casiri's Catalogue of Arabian MSS. in, VI. 310-influence of chivalry in, 605of, 672-extent of coal area in, VII. 127-unsound policy as to the precious metals, 146-colonies, 149-miserable

#### SPA—SPA

colonial system, XIV 707, 708; IL 701; XVII. 780-not a flourishing country in the middle ages, VII. 187-cointrade, 403-condition at the time of the Crusades, 530-war with England in the reign of Elizabeth, VIII 712-Armada, 1b -trade with England, 732, 733-drama, 145, 146-insects, IX. 65sieges of towns by the British, 823, 825 -French invasions of, X, 94, 149-French intervention in, 184; their operations under the Duke d'Angoulême, 185-Isabella acknowledged by France, 209 - Don Carlos, 210 - the Spanish marriages, 222, 226, 231, 232-French trade with, 259-subdued by the Goths, 577-gypsies, XI 171-historical writers, 549—war with the Dutch. 573, 574 - the Inquisition introduced, XII 387-treatment of the Jews, 779, 780, 783-language, XIII 213-libraries, 409-orders of knighthood, 123, 51events of 1808-1810, their effect in America, XIV 708-silver mines of, XV 231, 234—lead, 242—metallic produce of, 248—monarchy, 414—history of money, 436—coins, 442, 445; XVI 360, 387—mortality, XV 608—mysticism, 757 - newspapers, XVI 203 philology in the middle ages, XVII 521-mountain system, 595-height of mountains, 642, 643—poetry, XVIII 112, X. 403—postal system, XVIII 424—proverbs, 648—1ailway statistics, 787—the Reformation, 828—1eptiles, XIX. 15—romance, 265, 285—Roman conquests, 315—Cæsar's campaign in, 326-school of sculpture, 865-the Two Siciles under, XX. 259, 263—slave-trade, 322, 323—silk produced in, 278 effects of heavy taxes in, XXI 39; and of their reduction, 72-manufacture of tobacco in, 294 - universities, 492wines, 884-Wellington's campaigns in, 821, 822 et seq -weights and measures, 813—wool exported to Britain, 907, 911 —map of, XX. Plate See Spaniards, Spanish.

Spain (New), increase of population in XVIII 341.

Spalacotherium, fossil mammals, XVII. 160.

Spalanx, genus of mammalia, XIV. 185 SPALATO, or Spalatro, XX. 494-palace of Dioclesian at, II 126, III 470 SPALDING, in Lincolnshire, XX 494

– (Johann Joachim), German divine, XX. 495

- (William), XX. 495.

Spalding's improvement of the diving-bell, VIII 62, 63.

STALLANZANI (Lazaro), XX. 496-on the electricity of the torpedo, VIII. 573. Spandau, Prussian town, XX. 498. Spandrel, III. 513; XI. 205 SPANHEIM (Ezechiel), XX. 498.

Spaniards, their cruelties in America, IL 97, 701, 702-beards, IV 528-their proceedings with the bucaneers, V. 709 -their invasion of Chili, VI. 552; of Ireland, XII 477, 479—wars in the Netherlands, IV. 595; XI 562 et seq— conquest of Mexico, VII 418; XIV. 707-revolt of Mexico, 708-evils of their colonial system, 707-their treatment of the Haytians, XVII. 30—conquest of Peru, 462—discovery and occupation of La Plata, 779, 780 et seq .- conquest of Portugal, XVIII 384—dominion in the Two Sicilies, XX. 259, 263; XII. 651 et seq—three-decked ships first used by, XX 127—their rule in Bohvia, IV 830 et seq—their hatred of the French, X 150, n.—ships, and progress of discovery, XX. 124, 127, 188—their colonies in United States, XXI. 432

Spaniel XX 220 Spanish fowls, II. 356. pointer, XX. 219.

sword, III 632.

Town, Jamaica, XX. 498; XII. 672, 680,

# SPA-SPE

Spanish wax, XXI 779.

SPAR, XX 498—heavy spar, XV 94fluor, 93-needle, 92-bitter, 1b See Iceland Spai, Calcareous Spar, &c Sparedrus, genus of insects, IX 133 Sparidæ, or Sparoids, family of fishes, XII.

286, 287 Spark, electric, VIII 544

Sparmann on biids, XVI 729 Sparnodus, genus of fossil fishes, XII 343 Sparoidei, family of fossil fishes, XII 343. Sparning, XI 170

Sparrow, hedge, XVI. 756—house, 760-Java, XII. 705

Sparrow-hawks, XVI 743

Sparispongia, fossil sponges, XVII 92
Sparispongia, fossil sponges, XVII 92
Sparia, or Lacedemon, XX 498, XIII
145—army of, III. 625—wais with
Athens, IV 201 et seq—in its social arrangements an example of commun-1sm, VII 207-dancing at, 645-assistance to Macedonia given by, XIII 761
—ephon, IX 269—town, XX. 503, XI wars with Thebes, XXI. 177, 178 See Laconia.

SPARTACUS, XX 503-revolt of, XIX 322 Spartel (Cape), XV 594

Spartivento (Cape), XX. 242 Spask, two Russian towns, XX 503

Spasm, XVII. 700 - in domestic cattle. XXI 565

Spatangidæ, fossil echinoids, XVII. 99, 100.

zoophytes, XXI 991. Spatangus, XVII 99, 100

Spathe, in botany, V. 112

Spaulding (Solomon), his Mormon MS., XV 597

Spavin, XXL 558, 559

Spawn of salmon, IX. 589, 616, and n. 1.

See Ova
Spaying. See Castration
Speaker, The, of the British House of
Commons, XVII 296.

Speaking machine, I. 893

Speaking-trumpet, II 106; XXI 360 Spearman (Major), his reform of the British artillery, III 687 Spearmint, XI 745

Speciale (Nicholas), on an eruption of Ætna, II. 194.

Species, in logic, XX. 503

in natural history, III 174; V 174 producible only by original ereation, III 173-the production of fertile progeny not a proof of the identity of species of the parents, 174-distribution of species of plants over the globe, V. 222—number of species of animals, XVII. 631, of plants, 626-difference between human and all other, 641-in mineralogy, XV. 67

Specification, in logic, XIII 509.

- in architecture, III 402-for farm offices, IL 371 - of ships, XX. 197,

Specific Gravity, XX. 503; XI. 6; XII. 84 - table of, 88, 89 - Archimedes's knowledge of the doctaines of, III 430 -hydrostatic balance for determining, IV 386-of oil and coal gas, X 429-of minerals, XV. 56-of sea-water in different latitudes, XVII 573 - relative specific gravity of salt and fresh water, XVI. 81-of the water of the Dead Sea III. 761.

heat, I. 761, 926, 930, 932, 958; XI. 273 — term introduced by Prof. Gadolin, I. 761-its discovery madvertently assigned to Dr Irvine, 927, n. 1 —Regnault on, 958—of gases, 941, 953. Speckle on Fortification, IX 818 et seq Specodes, genus of insects, IX. 198

SPECTACLES, XX. 503—invention of, I. 624; XVI 524—mentioned by Roger Bacon, XIII. 449—snow-spectacles, XIV. 800 -Mr Airy's sphero-cylindrical spectacles, XVI. 567.

SPECTRA, XX. 503; XVI. 695; XVII. 678. Spectre. See Apparitions. Spectro-bat, XIV. 148.

Spectrum, prismatic, VI. 504; XIII. 451; XVI. 543, 580-lines of the, L 915; Sphegides, family of insects, IX. 195.

## SPE—SPH

XVI, 588, 544-action of gases on, 545 —heat of the, I 846, 954, XVI 592 point of maximum heat in, I 956chemical rays of the, 921, 922, XVI 594-action of nitious acid gas on, I 915, XVI 597, and of the earth's atmosphere, I 915, XVI. 598-S11 D. Brewster's analysis of, I 915, XVI. 596-colours of, 580-nrationality of the coloured spaces in, 583-secondary spectrum, ib 584tertiary, 586-optical phenomena of, 587 -physical properties of, 592 - recent discoveries respecting, 596

Spectrum, genus of msects, IX 157 Specular non, XV 108-ore of, XII 540 Speculation in trade, profits of, VII 197-

pennicious effects of, 1b Speculum, XX 503, XVI 552 et seq— for telescopes, XXI 130, 145—flexure of, 130-modes of supporting, ib-silvered glass specula, 131—construction of, 134 et seq See Minon, Telescope — Humano Salvationis, early printed

work, XVIII. 524, 526

Spedding (M1), VII 577.

Speech, XVII 679-characteristic of man, 11 775

Speechly (M1), on the Duke of Portland's plantations at Walbeck, XXI 271, 272,

SPEED (John), historian, XX 503 Speed-cones, in mechanics, XIV. 398. Specton clay, XV. 209 and n, 210 Spegel (Haqvin), archbishop, XIX 697. Speidell (J), on logarithms, XIII 553 Speke (Capt), African traveller, XXI.

SPELMAN (Sir Henry), XX. 503; VIII 231 SPENCE (Joseph), XX 504.

(William), entomologist, XX. 504; IX. 11—on entomology, 50 et seq.—coadjutor of Kirby in their Introduction to Entomology, XIII. 96. See Kirby and Spence.

Spencer (Earl), library of, XIII. 399; XVIII. 530—Dibdin's Bibliotheca Spenceriana, VIII 7; XVIII. 531.

—— (Herbert), on the brain as the seat of the mental faculties, XVII. 559—on over-legislation, XIII 265

- (Jona), theologian, AX 504-on baptism, IV 422 - (John Charles), third carl, XX.

504, V 660, 663. Spendius, VI 291

Spener, of Berlin, on a fossil saurian, AVII 140

- (PHILIP JAKOB), XX. 505

SPENSER (Edmund), XX. 505-on Ireland, IX. 618-his Shepherd's Calendar, XII. 859-on Sir P. Sidney, XX. 266, 268-merits of his poetry, XVIII. 121. - (Thomas), on multiplying works of

art in metal by voltaic electricity, XXI.

Spermaceti, its use in making candles, VI. 170 whale, XIV. 231-ambergris found

in, II 657; XIV 233. See Cachalot. Spermatic chord, III 69—fluid, XVII. 683 Spermatozoa, XXI. 975.

Spermatozolds, V. 142. Spermoderm, V 139.

SPEUSIPPUS, Athenian philosopher, XX.

SPEY, 11ver, XX. 508, XII. 438; XV. 576. SPEZIA, XX. 508; XIX. 633, 635. Sphacteria, IV. 205.

Sphæria, fossil mollusks, XVII, 107. Sphæridium, genus of insects, IX. 117. Sphæroderus, genus of insects, IX. 96. Spherodiota, family of insects, IX. 117 Sphærodus, genus of fossil fishes, XII.

337. Sphæronites, fossil echinoderms, XVII. 99. Spherostibite, mineral, XV. 76. Sphærotus, genus of insects, IX. 132. Sphærozoiæ, zoophytes, XXI. 1008. Sphagebranchus, genus of fossil fishes,

Sphagodus, genus of fossil fishes, XVIL

### SPH-SPI

Sphegina, genus of insects, IX 239 Sphenacanthus, genus of fossil fishes, XII 339 XVII. 117

Sphene, mineral, XV 110—pyro-electricity of, VIII 561.

Spheniscus, genus of biids, XVI 811

- genus of msects, IX. 132 Sphenocephalus, genus of fossil fishes,

Sphenoid bone, in man, III 17—in the maminalia, 77—in birds, 85

Sphenolepis, genus of fossil fishes, XII 347 Sphenosaurus, genus of fossil ieptiles, XVII 146.

Sphenotrochus, fossil corals, XVII 97 Sphere, XX. 508—in geometry, X 540, 558—projection of the, 488 et seq; XVIII 639—mensuration of, XIV 514 -refraction of 1ays by, XVI. 564 - celestial, IV 1-11ght parallel, and oblique sphere, 5—terrestrial, X 479—attraction of, IV 223—movement of heat in a, I 948—problem of the, 949 now to develop, in masonry, XX. 730 -Tatius' work on, XXI 35.
Spheres, music of, III 545, n 4

Spherical abeliation, destruction of, XXI.

- trigonometry, XXI 343 Spheriodactyli, reptiles, XIX. 36 Spherioda, XX 508—definition and properties of elliptical, IV. 221—attraction of spheroids of revolution, 225—men-suration of, XIV 517—sections of, in masonry, XX. 728.

Sphex, genus of insects, IX. 195 Sphingides, family of insects, IX. 209 Sphinx, fabulous monster, XX. 508 -Egyptian, VIII 501, 508.

- genus of insects, IX. 209 Sphyrama, genus of fishes, teeth of, XVI. 422—fossil, XII 346

Sphyrenoider, family of fossil fishes, XII

Sphyramodus, genus of fossil fishes, XII

Sphyrna, genus of fosul fishes, XII. 341.

Spice Islands, XV. 404. Spices, IX 765 Spider-wort order of plants, V. 213.

Spiders, III 373—power of reproducing lost parts, 375—ascent of, into the air, 376—webs, 374, 375—may be eaten with impunity, 376-blid-catching, 377 hunting-spider, 384—diadem-spider, 381—sea-spiders, VII. 641—then power of abstinence, III. 180—colour of their webs, XVI. 622—use of the webs in micrometers, XIV 744

microineters, AIV 744
Spigellaceæ, nat order of plants, V. 199.
Spilgellus (Adrlan), on anatomy, II. 761.
Spilke and Spikelet, in botany, V. 115.
Spilkenard, plant, V. 196
Spillbergen, his visit to the Ladrone islands,

XVIII. 269.

Spiller and Crooks, their mode of preserv-ing collodion plates, XVII. 548. Spillsbury (Mr), his method of tanning,

XIII. 808.

Spinacanthus, genus of fossil fishes, XII.

Spinaceous plants, XI. 741 Spinachia, genus of fishes, XII 280. Spinacides, family of fishes, XII 324 Spinacorhinus, genus of fossil fishes, XII.

SPINAGE, or Spinach, XX. 508; V 203--culture of, XI. 741.

Spinal cord, in man, III. 55; XVII. 668 function of, 674—in brutes, III. 103—in fishes, XII. 218, 219; XVII. 669. Spinax, genus of fishes, XII. 325—fossil,

Srinazzola, town in Naples, XX. 508. Spindle, XX. 508. Spindle-tree, XVII. 762.

- order of plants, V. 189. Spine (human), bones of, III. 4-canal of, 8-motions of, ib.-structure and func-

tions of, XVII. 672-disorders of, 700effect of poisons on, 702-of brutes, III. 75. See Spinal Cord.

#### SPI—SPI

Spinel or Spinelle, XV 87, XVII. 623-spinelle ruby lenses, XIV 768 Spines of plants, V. 79-of animals, XIV

SPINET, or Spinnet, XX 508 Spinigera, fossil mollusks, XVII 109. Spinigiada, zoophytes, XXL 984

Spinning, XX. 508—of silk, 281, 283, 285
—of 1opes, XIX 403 See Cotton-manufacture, Silk-manufacture Spinning-frame, Aikwright's, III 609, VII 442, XX 510

Spinning-jenny, III 609; VII. 441, XX.

SPINOLA (Ambrosio), Marquis de, XX 512, XI 572. - (Maximilian), his works on insects,

IX 17

SPINOZA (Benedict de), XX 512; VII 235 —his early life, I 144 and n 3, 4—Fontenelle's opinion of his system of philosophy, 145-his doctrines, in their practical tendency, the same as atheism, ib -points in which he has been misunderstood, 1b, 146-his ideas of God, 145, n 3—coincidence of his principles government with those of Hobbes, 116, n-tendency of his speculations to degrade human nature, ib, n - his private life and character, 264-exposition of his system, XVII. 234-on the authenticity of the Scriptures, XIX 828

—Jacobi on, XII 668 Spio, genus of annelides, XI, 298. Spira (Francis), XIX 827

(John de), printer, XVIII 532 Spiracles, or breathing pores, of insects, IX. 48

SPIRES, town in Bavaria, XX 515—diets at, XIII. 734, 735; XVIII. 822

in architecture, III 449, 481, 513-Gothic, 410—mediaval, XX. 735—Strasburg cathedral, 747

Spiralis, genus of mollusks, XV, 361 Spirifera, genus of mollusks, XVII 104. Spiriferidæ, family of mollusks, XV 338-fossil, XVII. 104.

Sphit, ancient opinions respecting, III. 308-use of the word in Scripture, XXL See Dæmon, Soul.

———— (Holy). See Holy Ghost. Spirit-level, XXI, 347. Spirit-rapping, XX. 445

Spirits, effects of excessive indulgence in, VIII. 24—number of gallons distilled in the United Kingdom, 51, 52-quantities charged with excise duties, 731imports of, into the United Kingdom, 735—distillation of, from potatoes, 51; XVI. 326—quantity distilled in Iteland, XII. 521—France, X. 247, 256—duties paid by retailers of, XIII. 435—Scotch manufacture of, XIX. 805-expediency of a duty on, XXI 41-excise duties, 59, 73-effects of the reduction of the duties on, 71-increase of duties on, 73-equalisation of duties, ib -quantities charged with consumption duties, 74. See Alcohol, Distillation

Spirituality of the Gospel Dispensation, L. 481.

of God, XXI. 190. Spiritus asper and lenis, II 613; III. 760 Spiritus, fish, XII. 245. Spirobranchus, genus of fishes, XIL 290. Spiroglyphus, fossils, XVII. 101. Spiroptera, entozoa, XXI. 981. Spirorbis, genus of annelides, XI. 294. Spirula, genus of mollusks, XV. 398. Spirulidæ, family of mollusks, XV. 398 Spirulirostra, fossil cephalopods, XVII.

SPITALFIELDS, XX. 516; XIII. 659; XIV. 809—silk-weavers of, XX. 276; distress among, in 1764, V. 469. SPITHEAD, XX. 516; XVIII. 879.

Spittal of Berwick, IV. 681, 682. Spittals' Hospital, Stirling, XX. 702. Spittle. See Saliva. Spitzbergen, XX. 516—glaciers of, X 625

## SPI-SPU

—flowering plants of, V. 226; XVII 626, XVIII 178. Spix (Di), on Brazil, II 670 et seq-

Splanchnic nerve, III 58

Spleen, erectile tissue of the, II 799-anatomy and functions of, III 62; XVII 657-diseases of, in domestic animals, XXI 570

Spleenwort, V. 216. Splint, XXI 558 Splint-coal, VII. 118; XII 543. Spodumene, mineral, XV 72. Sporte (Ludwig), violinist, XX. 516. Spoils, XX 517

Spolero, in the Papal States, XX 517—delegation of, XVII 243 SPONDER, XX. 518; IX 770 Spondylis, genus of insects, IX. 144 Spondylus, genus of mollusks, XV. 348-fossil, XVII. 106

Sponge, in baking, IV 380

SPONGES, XX. 518; XXI 1008-fossil, XVII 92—use of, in diving, VIII 57 Spongioles, or spongelets, of plants, V 76. Sponsors, in baptism, IV 424. Sponzilli on Napoleon's military tactics, XXI 703

Spool, in net-making, XIX 90. Spoon-bills, birds, XVI. 800. Spoon-wheels, XII. 169 Sporancia, islands, XX 518 Sporancia, in botany, V. 113. Spore, in botany, V. 141, 142.

Sporocarps, in botany, V. 141.

Sporting dogs, XX. 218. Sports, English. See Hunting, Shooting, &c -Egyptian, VIII. 441

Sportsmen, English, XX. 211.
Spots, solar, IV. 25, 28—theories regarding,
29—their rotatory motion, 88—their connection with the temperature of the seasons, 30; XIV. 637 — works on, IV. 31 — their appearance periodical, XIV. 637-observed by Galileo, X 376 -lunar, IV. 42-on the planet Mars, 66,

SPOTSWOOD (John), XX. 518-his account of Hungus's vision of St Andrew's Cross, XIX 749

Spout-fish, XV 350 Sprague (Major), unecdote of certain Indians related by, VI. 146. Sprains in cattle, XXI 559.

SPRAT (Thomas), bishop, XX. 518-his estimate of Bacon's genus, I. 211-his

defence of the Royal Society against the elergy, XIV. 461.
——fish, XII. 236, IX. 763—sale of, in London, 649—fishery of, in Britain, ib.

—in Ireland, 634—Sicily, 247. Sprotella, genus of fishes, XII. 237. Spree, river, IV. 667.

SPRENGER (Kurt), botanist, XX. 518. Sprenger's catalogue of MSS, in the libraries of the king of Oudh, XIII, 431.

Spring, season, the young of most animals produced in, III. 182—beauty of, IV. 544.

in mechanics, of clocks and watches, VIL 14, 21 et seq.—spring-clocks, 18of coaches, 43.

Spring-bock, antelope, XIV. 210. Spring-tide, XXI 249. SPRINGFIELD, in Mussachusetts, XX. 519;

XIV. 340 - in Illinols, XX. 519. - in Ohio, XX. 519.

SPRINGS, XX. 519; XVII. 601-thermal, 602—gaseous, ib.—intermittent, ib; XVIII. 81—indicate the medium tem-perature of climate, VI. 768—boiling springs, in Iceland, XII. 201; in St Michael, IV. 336; Barbadoes, 430—hot springs of Radm. 341. among the springs of Baden, 361; among the Ilimalayas, XI. 448. See Mineral

SPROTTAN, Prussian town, XX. 519. Spruce fir, XVII. 756—hemlock spruce, V. 209—timber of, XXI. 275. Spur, XI. 686-spur-money, XIII. 112-

batile of the spurs, VII. 468. Spur-wing, bird, XVI 816. Spurgewort, order of plants, V. 206.

## SPU-STA

Spurius Cassius, XIX. 299. - Machus, XIX 302

Spurzheim (Johann Gaspar), XX. 519his connection with Gall, X, 384-on phrenology, XVII 558, 561, 562.

Spyne, or Spynace, XX 123
Squal, sub-order of fishes, XII 323
fossil, 341.

Squalidæ, fossil fishes, XVII 118 Squalo-raja, fossil fishes, XII 342 Squamipennes, or Squamipennæ, fishes, XII 299—fossil, 344

Squamous suture, III. 27 Square, X. 508-method of least squares, XVIII 633, I 819

- barometer, IV. 454. - root, extraction of the, III 606 Squaring of the circle, XX. 520; X 530

Sec Quadratme Squatarola, genus of birds, XVI. 797. Squatina, genus of fishes, XII 325, 319,

320, 323, Squatinide, family of fishes, XII 325

Squids, mollusks, XV. 399, 400 Squil, plant, V 213 Squillace, gulf of, XX 242.

Squintec, guil of, XX 242.
Squinting, origin of, XVI 694.
Squire, in chivalry, VI. 613
Squintels, XIV 178, XXI. 548—fur of,
X. 349—in Canada, VI. 142—Alpine squirel, XX. 489

Stability of structures, XIV 380-of position and friction, 381, 382—of floating bodies, XX 152—statical stability, ib. of the solar system, I 811—principles of, in masoury, XX 715. Stalle, XI 663, 669—specifications for, II.

379

Stackhousiacem, nat. order of plants, V.

Stacks of corn. II 314 STADE, in Hanovel, XX. 523. STADIUM, AX 524

XIX. 989.

- edifice in ancient Athens, IV, 170 STARL (Anne M L G. Necker, Madame de), XX 524-on the literary life of Voltame, and the French philosophy of the eighteenth century, I. 277—on Kant's Critique of Pure Reason, 190—mistakes of, respecting the philosophy of Locke and Leibnitz, ib, n 3—on German philosophy, ib, n 2—on Fichte's philosophical system, 200—her death, X. 178—her hatied of Napoleon, XV. 791. n.; X. 129—her account of Mirabeau, XV. 260 her acquaintance with Schlegel, XIX. 723-her exertions in favour of Talleyrand, XXI 12-character of her novels,

STAFFORD, English town, XX. 528, 531.

(Edward), Duke of Buckingham, VIII. 698. STAFFORDSHIRE, XX. 529-potteries of,

VIII. 732; XVIII. 433 — population, value of property, &c, VIII. 754—hom manufacture in, XII. 561—perpetual Staffordshire almanack, II 599—boilerplates, XX. 634

Stag, XIV. 208—order of the golden stag, XIII 121.

Stag-hound, XI. 764. Stag-hunting, XII. 39.

Stage, in theatres, VIII 135. Stage-coaches, VII. 43. Stagirus, or Stagira, birth-place of Aristotle, III. 583

STAGNELIUS (Erik Johan), XX. 531; XIX. 701. STAHL (Georg Ernst), XX. 531-doctrines

of, XIV 528. STAINDROP, in Durham, XX. 532.

Stained glass, X. 667. STAINES, in Middlesex, XX. 582—iron bridge, XIL 579.

Stainton (II. J.), his works on insects, IX. Stainville (M. de), IV. 479. See Choiseul

(Duke de). Stair (Lord). See Dalrymple (James).

## STA-STA

Stair (Rev J B.), his description of an annelid, XI 297. STAIRCASE, XX. 532, 732 See Stairs

- shell, XV. 382

Stairs, III 489, XX. 732-building of, V. 739—measurement of, 754—construction of wooden, XII. 813—fixing the landings of, 812-construction of, to guard against fire, VII 331-solid and arrıs steps ın, XX. 732

Staking of horses, XXI 570 Staktometer, Biewster's, XII 87.

Stalactites, XV 143

Stalagmites, XV. 143 STALEYBRIDGE, in Lancashire, XX 532-steam-engine in a mill at, 607.

STALIMENE, Island, XX. 532, XIII 331 Stall-feeding of cattle, II 345 Stallion, II 339, XI 633 et seq

STAMENS of plants, XX 532; V. 117, 118, 125, 126 et seq —transformations of, 129 STAMFORD, in Lincolnishire, XX 532—custom of Borough-English at, XVIII 516.

Stamford-bridge, battle of, VIII. 663 STAMMERING, XX, 533

Stamp Act, for America, V 469-its repeal,

Stamp-duties, XXI 64—when first intro-duced into England, 65—on policies of insurance, XII 409—on leases, XIII 305—on newspapers, XVI. 184, 189, 190—in Scotland, XIX 809.

Stamping of coins, VII 92

Stamps, manufacture of postage, XVIII

Stanches, on rivers, XVI 63 Standard of value, XV 419-of moncy, 428, 430; VII 73—variations of, ib , XV.
431, 437—bad effects arising from, ib.
battle of the, XIX 752
n botany, V 124

Life Assurance Company, XII 409,

411 Royal, IX. 651.

weights and measures; XXI. 799, 801

Standards of the Scotch Established Church, XVIII 493-Free Church, 495. Standing, muscles employed in, III 41 Standinger (Otto), his work on insects.

STANBOPE (Charles), Earl of Chesterfield XX. 535-his method of fire-proofing XIII. 438—his printing-press, XVIII

(George), divine, XX. 536. (Lady Hester), XX. 535. (Philip Dormer), Earl of Chester-

field, XX. 535—his government of Ire-land, XII. 494—his treatment of Dr Johnson, 796, 797.

STANISLAS LESZCZYNSKI, king of Poland, XX. 536, 853, 854.

Polish kings, XVIII 145, 160

STANISLAWOW, in Austrian Galicia, XX 587. Stanley (Lord), on the importance of statistics, XX. 550

- (Mr), measure for the abolition of slavery introduced by, XX 325.

— (Captain Owen), his survey of the coasts of New Guinea, IV. 263.

- (Thomas), XX 537. STANNARY COURTS, XX. 537. Stannine, mineral, XV. 121. Stannite, mineral, XV. 109 STANOVOI Mountains, XX. 537.

Stansbury (Mr O), his mode of arithmetical computation for the blind, VII.

Stapelias, plants, region of, V. 228; XVII. 629. Stapfer's account of Berne, IV. 671. Staphyleaceæ, nat order of plants, V 189. Staphylinus, genus of insects, IX. 103. Staple Inn, Chancery, XII. 385.

of wool, XXI. 905—merchants of

the, 908

Star of Bethlehem, plant, V. 150. STAR-CHAMBER, XX. 537; V. 394, 898; XIII. 856

Star-fish, XXI. 991. Star-forts, IX. 809. STARAJA RUSSA, in Russia, XX. 587. Starboard tack, XVI. 12.

#### STA-STA

STARCH, XX. 537, II 380; V. 72, 320; IX. 755; XIX. 610—a constituent of flour, IV 379—chemical character of, VI 515, 516-its conversion into sugar in malting, V. 320—sugar of, VIII 47 -its conversion into dextrine, II 380-(see Dextrine)—lichen-starch, ib , IX 756-inuline, ib , II 380-nutritive properties of, VIII 19

Starching of cotton cloth by bleachers, IV. 766

STARGARD, town in Pomerania, XX. 537 - town in Prussia, XX 538 STARK (William), physician, XX 538-

experiments on digestion, VIII 21, 22. Starkenburg, in Hesse-Darmstadt, XI 362 Starkie (Mr), on the law of wagers, X. 394 Stailing, bird, XVI 763

STARODUB, in Russia, XX 538

Stars (fixed), IV. 79, 3-aberration of, II - acceleration, 74 - scintillation of, IV. 10—arrangement of, 79—distance, magnitude, and number of, 81—proper motions of, 82, I 845, 861-parallax of, IV 81; I 864, 841—catalogues of, IV 80, 95, 143, III 791; VI 331—apparent magnitude, number, and distribution of, IV 95-double stars, I. 841, 861, 862, IV 84—multiple, ib —variable, ib, I 862—brightness of, 862, when seen off the southern coast of Africa, II 216 — knowledge of, among the Druds, VIII. 186—how to take the altitude of, XVI 32-spurious discs of, 618 —fixed lines in star light, 591—shooting-stars, XIV 684; VIII 588, IX 586 determination of the longitude by, XIIL 689. See Nebulæ, Milky-way

- in pyrotechny, XVIII 707 Starvation, power of different animals to resist, III 180—case of voluntary, VIII, 23-death from, XIV. 430.

Starwort, order of plants, V 206 Stassfurthite, mineral, XV. 94. State, definition of, X. 731—error of mak-

ing church and state one community, I 539

constitutions of the United States. XXI. 431. STATEN ISLAND, XX. 538, XVI 213.

Stater, Greenan gold coin, XVI 360 States, Greenan gold cam, Avi sou States of Europe, IX. 397—states-general of Holland, XI. 586—convocation of the states-general, X. 44—arms of, XI 322—duties of, to each other, XV. 569, to their subjects, 570 - in the United States, XXI 419

Statical balance, IV. 452—statical stabi-lity, XX 152—statical electricity, VIII. 533; I 987

STATICS, XX. 538-principles of, I 721. Stationary beam-engines, XX. 603
Stationers, V. 30—Stationers' Company,
VII. 356—their registry of books, 359

—their almanacs, IL 598. Stations, railway, XVIII. 765

765, 766, 770, 771—intermediate, 772—station works, 768—fittings, 776—signals, 778—for locomotives, 774 et seq
STATISTICS, XX. 549—Achenwall the founder of the science, II. 84-distinct from political economy, XVIII 224-of vegetation, V 224-agricultural, of Scotland, XIX. 791—of textile industry, XXI 791. See Census, Population, Sanitary Science, and the different

countries. from, XVIII. 325

Statuary porcelain, XVIII. 439.

Statues, Greek, III. 707—casting of. V. 676 - gigantic figures crected by the Egyptians and Babylonians, VII. 716—measurement of ancient, VIII. 172—foundry of, IX. 848—ancient coloured,

XIX 844—in London, XIII 675—Rome, XIX 369—Glasgow, X. 650. Stature (human), II 691; III. 2—of the Patagonians, IL 691; XVII 335. Statute-labour, in Scotland, XXL 48.

## STA-STE

Statute-law, XIII 255-reason for not 1educing unwritten law to, 269—defective nature of English, 271, its reduction into a practical code, 273, n. Staubbach, falls of the, XVII 605

Staudhn on the character of the Phansces, XVII 505.

STAUNTON (Sir George Leonard), XX 553
—on China, VI 564, 568, 596—his translation of Chinese works, 578, 577.

- (Captain), his defence of Corygaum, VII 422 Staulolite, or Staulotide, mineral, XV 86

STAVANCER, IN NOTWAY, XX 553 Staves of casks, VII 342 Staveopol, in Russia, XX 553, XIX 521

Stays, missing, in sailing, XX 14.

STEAM, XX 554, XI 270, 272-general considerations regarding the properties, phenomena, and application of, AX. 554, 557, 572—ordinary or saturated steam, 564, relation between its pressure and temperature, 1b—constituent heat of, 566—density, 568—distribution and mode of action in the steam-engine, 595 et seq —work of, in the steam-engine, 617, 620, 627—Watt's first experiments on, I 867-its elasticity, 953, 958-its introduction into nautical affairs, 869; XX 20-propulsion of vessels by, 159its use for horticultural purposes, XI 721-its application to domestic purposes, 272-steaming of wood for bending, XII. 811, for preserving, XX 167—colour of, XVI 692—history of its application to locomotives, XVIII 779. See Evaporation, Steam-engine, &c.

Steam-carriages, I 881 See Locomotives Steam-coal, VII 118.

Steam-colours, in dyeing, VIII. 316. Steam-draining, VIII 131\* STEAM-ENGINE, XX 573—origin and his-

tory of, L 800; XX. 573-era of the Marquis of Worcester, 574; I 866; of Watt, XX 576; I 807 (see Watt) history of the modern steam-engine, XX 589—late improvements in, XIV. 277—atmospheric engine, I. 867, 868, XX. 575 et seq —double-acting, I. 868 high-pressure engine, principle of, VI. 460—beam engines, XX. 603, 607—direct action, 608, 610, 641—pumping, 611, I 868—portable, 614—marine, 641—seriew, 643 et seq—long and short stroke, 646—combined cylinder, 647—its influence on the manufacture of iron, XII 539, engine used in, 558—use of, in mining, XV 227—boring of cylinders for, V. 43-wooden beams for, VI. 267 congelation might be connected with, VII. 107-history of its introduction into cotton manufacture, 446—use and manufacture of, in France, X 256—governor, XIV. 410—for farms, II 281; XX. 614 -for draining Haarlem Meer, XI. 173. See Steam, Steam-Navigation, Locomotive, Watt, Boilers

Steam-hammer, XI. 201, XII. 563-its use

in making anchors, XX 24
STEAM-NAVIGATION, XX. 636—introduction
of, I. 869; XX. 136—its benefits to Britain, VII 457—mistake frequently committed in, XX. 22—skill in some points of seamanship deteriorated by, 23-introduced into the postal service of Britain, XVIII. 425-steam navy of Britain, XVL 95, 96; XX 640, 669, 670; VIII. 741—vessels belonging to the different ports of England, 738; Scotland, 739; Ireland, ib — at the different British colonies, 740—of France, X. 278 -mode of ascertaining the tonnage of steam-vessels, XXI 304; allowance for engine-room in, 306, 307-of the United States, 426.

Steam-press, in printing, XVIII. 559; hthographic, XIII. 518. Stearic acid, II. 381; VI 170. Stearine, VL 510; IX. 757; XVI. 492. Steatite, XV. 79—eaten by the natives of

New Caledonia, VI. 266 - its use in manufacture of porcelain, XVIII. 439-in Cornwall, VII. 408.

#### STE-STE

Steatornis, genus of buds, XVI 759. STEEL, XX 672-annealing of, III 218composition of, VI. 490—tempering of, VII 600—engraving on, VIII 809—specific gravity of, XII 88—magnetic power of, XIV 9—probable early use of, XI 410-optical properties of, XVI 684—art of converting from into, XVIII. 815—steel-plates for ships, XX 175—cohesion of, 757—tensile strength of, 779 Sec Cutlery, Iron

Steel-bow, in farm leases, II 365. Steel-pens, XVII 399

STEELL (Sir Richard), XX 672-his connection with Addison, II 134, 135—Swift's pamphlet against, XX 873 his connection with Diuly Lane Theatie, XXI, 173

STERLYARD, XX 672, IV. 385; XIV 415, XXI 797—association of the, XI 215 STERN (Jan), painter, XX 673, XVIII 75 Steenbock (General), XX. 851 ct seq.

Steenstrup (Professor), on the sexual characters of the Cephalopoda, XV 401, n 4-on alternate generation, AVII 688

Steeple, m architecture, III. 513 Steeple-chace racing, XI. 688. Steering See Seamanship.

STELVENS (George), XX 673 — on the popularity of Shakspeare, 71

STELFANI (Agostino), musician, XX 673 STELFLNS (Heimlich), XX 673

Stegana, genus of insects, IX 256 Steganodictyum, fossil sponges, AVII 92 Steganophthalmata, zoophytes, XXI. 1001. Stegostoma, genus of fishes, XII 323, 321 Spein (II. F. Kail, Baion von), XX 674 STEIN-AM-ANGER, town in Hungary, XX.

Stein-bock, in zoology, XIV. 212. Steinheil, his electric telegraph, I. 986; XXI. 100, 102, 104-his mode of silver-

ing specula, 132. Steininannite, mineral, XV 119 Steinthal (II.), on philology, XVII. 517. Stele, in architecture, III. 519. Stella, XX 871, 874.

Stellatze, nat order of plants, V 196 Steller, in zoology, AIV 220 Stelleria, extinct mammals, AVII, 176. Stellerida, zoophytes, XXI 991. Stellerus, genus of mammalia, XIV. 219. Stellio, genus of reptiles, XIX 31.

Stellispongia, fossil sponges, XVII. 93. Stellite, mineral, XV. 75 Stells for sheep, Il. 352, 358, STELVIO, pass across the Alps, XX. 675.

Stem of plants, various forms of, V. 78-internal structure, 80-exogenous, ib. endogenous, 83-acrogenous, 84-subterranean, 79-physiology of, 101. Stemmata, and stemmatic eyes, in insects,

IX. 46, 47. STENDAL, Prussian town, XX. 675. Stenelytra, family of insects, IX. 131. Steneosaurus, fossil reptiles, XVII. 142—teeth of, XVI. 487.

Stennis, stones of, XVI. 718 Steno (Nicholas), anatomist, II. 761, 762on the lymphatics, 804

Stenodactylus, genus of reptiles, XIX. 37. Stenodus, genus of fishes, XII. 245. STENOGRAPHY, XX. 675; II. 617. Stenopterus, genus of insects, IX. 145.

Stenopteryx, genus of insects, IX. 259. Stenorhynchus, genus of mammalia, XIV. 172-dentition of, XVI. 463.

Stenostoma, genus of insects, IX. 133. Stenotrachelus, genus of insects, IX. 182. Stenus, genus of insects, IX. 103. Step, in architecture, V. 739—steps of a ship, XX. 190.

Stephanite, mineral, XV. 120. STEPHANUS (Byzantinus), XX. 679.

— (Спаньы), XX. 680. (HENRY), printer, XX. 679—his Thesaurus, XVII. 523, 526.

(HENRY), XX. 680—Scapula's conduct to, XIX. 702. - (PAUL), XX. 681.

(ROBERT), XX. 679; XVIII. 543— his Thesaurus, XVII. 523, 526—his

#### STE-STE

Bible and Testament, IV 695, 698; XIX. 837.

STEPHANUS (Robert), XX. 680. - genus of insects, IX 188 STEPHEN (Sir James), XX 681—on Gregory VII, XI 51—on Jansen's Augustanus, XII 686

- sovereigns so named, XX 681-of Hungary, XII 12, 20-king of England, VIII 671-lus war with Scotland, XIX. 751.

Stephen's ink, XII. 383.

- Memous of John Horne Tooke, XXI 310

Stephens (George), on urrigation, XII 613 (II), his collection of spurious odes of Anacreon, II 744

(Henry), his Book of the Farm, II 322.

- (J F), his works on British insects, IX 14

- (J L.), on the architectural remains of South America, III. 502: IL. 697-his incidents of travel, ib

STEPHENSON (George), XX 681-his early history and character, I 883-his safety lamp, 1b -lus improvements in locomotive engines, ib , XVIII. 779-adapts railways to them, I 884-his experiments on the friction of trains, ib his locomotives adapted for the Manchester and Liverpool Railway, 885his death, 886-passenger locomotive by, XX 614-his valve-gear for locomotives, 585-his link-motion, 586, XIV 401-his opinion on gradients, XVIII

- (ROBERT), XX 682; I. 876, 878, 886 — his tubular bridges, 877; XII. 607, 608 — his improvements in locomotives, XVIII 779, 780-on railway legislation, 798-his plan for working railways on lease, ib -bridge at New-castle erected by, XVI 166-bridge at Sunderland improved by, XX 807.

STEPNEY, in Middlesex, XX 684 Steppes, in South America, II 668, 703—in Eastern Europe, IX 983; XVII 610—in Russia, XIX 515—Siberia, 548. Sterculiacem, nat. order of plants, V. 184.

Stère, French solid measure, X. 284. Stercobate, in architecture, III. 519. Stereoguathus, genus of fossil mammals,

XVII. 159, 163 Stereographic projection, X 489.

Stereometer, XII. 87. Stereometry, Kepler's tract on, I. 554.

Stereomonoscope, XX 689. Stereoscope, XX. 681—invention of, XVI. 542, 543; XVII. 450; I 925—principle of, as stated by Galen, XVI. 523—phe-

nomena of, XIV. 574. STEREOTYPE, XX. 691; XVIII 549stereotyping of wood-cuts, 551-invention of the art, X. 414

Sterility, causes of, XIV. 425-of hybrids, III. 174.

Sterlet, fish, abundance of gelatine in, III.

STERLING (John), XX. 691-Hare's life of, XI. 228.

money, VIL 71-silver, 72-gold, ib. See Standard of Value Stern of a ship, XX. 163 et seq Sterna, genus of birds, XVI. 813 Sternarchus, genus of fishes, XII. 234. STERNBERG, Austrian town, XX. 692. Sternbergite, mineral, XV. 121.

STERNE (Laurence), XX. 698, 362—Nol-lekens' bust of, XVL 288—his character of Lord Bathurst, IV. 508-his novels, XIX, 274.

STERNHOLD (Thomas), XX. 693. Sternoptyx, genus of fishes, XIL 248. Sternopygus, genus of fishes, XII. 234 Sternoxi, family of insects, IX. 104 Sternum, in man, III. 9-mammalia, 76birds, 85-fishes, 90-insects, IX. 37.

Steropis, genus of insects, IX 194
STENCHORUS, Greek poot, XX 693.
STETHOSCOPE, XX 694; XIV. 464—invention of, XIII. 151—use of, in determining pregnancy, XIV. 426.

#### STE-STI

STETTIN, in Prussia, XX. 694, XVIII. 284-wooden bridge near, VL 383-herring trade of, IX 640

STEUBENVILLE, in Ohio, XX 694 Steven (Mr), builder of a bridge in Dubhn. VI. 382, n. 1.

- (Christian), his work on insects, IX 1ì.

Stevens (R L), his improvements in steam-boats, XX. 638—his plan to pre-vent smoke, 354.

Stevenson (Alan), his Treatise on Lighthouses, I 907-Sken yvore lighthouse elected by, ib; XIII. 467-his description of the difficulties of that undertaking, 1b, 468-on lights for lighthouses, 475, 477, 478, 479-on under currents in Ciomarty Firth, XVI 61on the river Conon. 82.

(David), on the force of waves, XI 216-his work on marine surveying, XVI 59, n 2

- (Messis), their operations on the river Tay, XVI 73, Forth, 75, Ribble, 77, Lune, ib ; Dec, 83

(ROBERT), XX 694, I 907-on the destruction of timber by the Limitoria terebrans, VII 542, XI 224—Bell-rock lighthouse elected by, XIII 465, 466his flashing and intermittent lights, 481 — on the currents of the river Dee, XVI 61, 81—sca-wall at Trinity by,

(Thomas), his holophotal system of lights, XIII 477—his catadioptic glass mirror, 478—dipping and apparent lights, ib -his spherico-cylindric lenses,

- (W B), his account of the Peruvians, II. 689 and n. 1.

Stevinus, or Stevin (Simon), engineer, I 590-discovered that the pressure of fluids is according to their depth, 596introduced the practice of decimal fractions, 703—on hydrostatics, 708—on the resolution of forces, VIII 935—on navigation, XVI. 3—on locks in rivers, XIX. 222

STEWARD, XX. 695-Lord, of the royal household, XI. 774.

Stewart (Charles), of Hillside, VIII 237.

— (DUGALD), XX. 695, I. 402-410—
his Dissertation on the progress of metaphysical and ethical philosophy, I —on beauty, IV. 540, 554—succeeded by Dr Thomas Brown, V. 684—on dreaming, III. 321, n.; VIII. 176—his account of a deaf and blind boy, VII. 688-on Locke's definitions, XIII. 601, n.—on the origin of language, 188, n.—on insanity, XIV. 526—on metaphysics, 551, 555 et seg .- on attention, 575 conception and imagination, 576-on moral distinctions, 580-on volition duiing sleep, 583, n 3-Mills' eulogium on,

233-his character of Dr Adam Smith, - (John), his rope machinery, XIX.

XV. 11-on Robertson's Charles V., XIX. 231-on Dr Reid, 2; Dr Robertson,

- (Matthew), XX.698; I. 698; X 505 -completed the Newtonian theory of the moon, 780; IV. 104-Playfair's Life of, XVIII. 4-on poisms, 361.

STEWARTON, in Ayrshire, XX. 609. Stewing, IX. 766. STEYER, Austrian town, XX. 699 Sthenopus, genus of fishes, XII. 283.

Stibine, mineral, XV. 119. Stiblite, mineral, XV. 112. STICCATO, XX. 699.

XX. 344

See Lac. Sticklac. Sticklebacks, fishes, XII. 281-in salt reservoirs, XIX. 588. STIEGLITZ (C. Ludwig), XX. 699.

- (Dr), on animal magnetism, XX.

Stiell's Hospital, XI. 178. STIFFL, XX. 699, I. 707—mathematical attainments of, 558—his improvements in algebra, II. 485. Stiffness, in structures, XIV. 380, 583.

### STI-STO

STIGLIANO, town in Naples, XX 699. STIGLMAYER (J Baptist), XX 699. Stigma, in botany, V. 118, 130, 132 Stigmaria, V 235.

Stigmatophora, genus of fishes, XII 315 Stigmus, genus of insects, IX. 196 Stilaginacem, nat older of plants, V 207 Stilbacea, nat order of plants, V 202 Stilbite, mineral, XV, 76

Still, used in distillation, VIII 47, 49. - (John), bishop, XX. 699-comedy by, XXI 166

STILLING (J II Jung), XX 699 STILLINGFLEET (Edward), XX 700 (Венјамин), XX 700 Stilpnomelan, mineral, XV 79 Stilpnosiderite, mueral, XV 108 Stilpno of Megara, XX 700 Stilton cheese, VIL 625, XIII 320 Stimulants, in medicine, XIX 611 Sting, of the bee, IV 573-of arachmidæ and insects, XIV 440-of plants, V. 75

See Entomology Supend of the Scotch clergy, XVIII 494

Stipules of leaves, V. 93 STIRLING, XX. 700—carse of, VI. 276—bidge of, IX 796.

- (James), I 711, n 3-his theorem, XVIII 617.

- (Sn James), his expedition to Japan, XII 699

(Mr), of Glenbervic, on the mode of sowing grass-seeds, IL 322.

(Di Robert), his heat economiser,

XX 619 (William) of Keir, his Life of

Charles V , XIX. 231, n 2. STIRLINGSHIRE, XX 702—agricultural statistics of, XIX 796, 797, 798-population, 799

Strrup, XI. 675, 685. Stizus, genus of insects, TX. 195 Stjernhjehn (George), Swedish author,

STILENSTOLPE, Swedish author, XX. 701; XIX 699

Stoa, in architecture, III 513-Poecile, in ancient Athens, IV. 161-of Hadrian, 164

STOBLEUS (Joannes), XX 704. Stock. See Horses, Cattle, Sheep, &c in graiting, V 168; X1 695, 703. Stock-Exchange, London, XIII 663

Stock-fish, XII. 269; XVI. 327. Stockach, battle of, X. 111. Stockade, in fortification, 1X. 799

STOCKHOLM, XX 704, 861 et seg., IV. 404
—Academy of Sciences at, II. 66—Academy of the Fine Arts, 68-libraries, XIII. 427—early printing at, XVIII. 533 -climate, XX 861 - assembly of the diet at. 865-state of crime, 866-births.

STOCKING, XX. 706-yarn, VII 448. Stocking-manufacture of England, VIII. 702—Nottingham, XVI. 300—Lelecstershire, XIII. 321—Derbyshire, VII. 755 -Hawick, XI 216

Stocking-trade, VII 448. STOCKPORT, in Cheshite, XX. 706. STOCKS, XX. 707 See Funding System.

as a punishment, XVIII. 575.
STORKTON-UPON-TIES, XX 707, VIII. 266.
Stodart (Mr), his mode of tempering steel, VII 600.

STODDART (Sir John), XX. 707. - (T. Tod), on the destruction of un

spawned salmon in the Tweed, IX. 616 -his estimate of the amount of salmon ova spawned in the Tweed, ib STOICS, XX. 708; I. 318-notice of the

most celebrated, 319-evils which resulted from their attempts to stretch their system beyond the limits of nature, 320-their theory on the basis of morality, XV. 550-their opinions on predestination, XVIII. 477. Stoke, battle of, VIII. 695.

Stoke's engraving machine, VIII. 810. STOKE-UPON-TRENT, XX. 708, 531. Stokers and stoking, XX. 648. Stokes (Prof. George Gabriel), I. 924-on

#### STO-STO

the earth's attraction, 851-on the pendulum, 853-his definition of the index of friction, 887-on the refrangibility of light, 924-on the conduction of heat, 952-on optics, XVI 550, 669, 694.

Stokes (M1), his survey of the coasts of Australia, IV. 254. STOLBERG (the Biothers), XX 708

Stoll (Casper), hus work on insects, IX 7 Stolon, and stoloniferous plants, V. 79 STOLPE, Prussian town, XX. 708 Stoltzlurs, engravers, VIII. 800. Stolzit, mineral, XV. 106

Stomach, human, III. 59—digestion in, XVII. 659 See Digestion. of brutes, III 108—of bees, IV. 572—msects, IX 51—diseases of, in the

domestic animals, XXI 565, 567, 568 Stomach-pump, XVIII. 193 Stomach-staggers, a disease in cattle, XXI.

566 Stomapoda, crustacea, VII 542 Stomata, or Stomates, of plants, V. 74.

Stomas, genus of fishes, XII 250. Stomoxidae, family of insects, IX 245. Stomoxys, genus of msects, IX 245 STONE (Edmund), XX 708

- in the bladder See Calculus (Urinaiy).

Stone-chat, bird, XVI 753. Stone-cutting, XX, 710, 725 Stone-flies, use of in angling, III 149, 150.

Stone-lihes, XVII 98.

STONE-MASONRY, XX. 710; V. 737; XIV. 336—materials used in, XX 711—principles of stability and strength in, 715 -foundations, 721-stone cutting, 725 artificial stones, and the induration of soft stones, 735

Stone-masons, XX. 710, 711-diseases of, XIV. 442.

Stone-paving, V 739. Stone-walls, measuring of, V. 740. Stonecrop, order of plants, V. 194.

STONEHAVEN, XX 708, XIII 89.
STONEHAVEN, XX 709; IL 665; III 433, 434; VIII 187; XIII 2
STONEHOUSE, XX 709, XVIII 19.

Stones, transmission of sound by, II 101
—building with, V 737 et seq.—expansion of, by heat, M. 268—specific gravity of various kinds of, 88-strength of. XX 759, 758—rocking, or logan stones, VIII 187, XV 166; VII 764—in con-struction, 323, 328—as building ma-terials, XX. 711, 712—their durability and causes of decay, 712 - strength and resistance of, 717, 759—stone period in archaeology, III. 419. See Geology,

Mineralogy, Limestone, Sandstone, Marble, Stone-masonry. Stonesdeld, strata at, XVII. 158, 159— fossil insects of, 103—inegalosaurus in,

Stoneware, XVIII. 430, 434. Stony-Middleton, in Derbyshire, tepid spring at, VII. 755. Stooking sheaves, II. 314.

STORACE (Stefano), XX. 736. Storax, order of plants, V 198.

resin, V 198.

Storch, on the mercantile system, XVIII. 215-on political economy, 228, n. 1 et seq. Storck, Anabaptist leader, II. 742.

Storeys, commencement of the practice of building houses in, III. 447. Storks, XVI 799

Storm (Edward), Norwegian poet, XIX. 693.

Stormontfield, artificial breeding of salmon at, IX 502, 598, 595, n.; XVII. 455. Storms, law of, VI. 774—indicated by the barometer, IV. 458 See Meteorology,

STORNOWAY, XX. 736; XIII. 352-fisheries of, XIX. 427; IX. 640, 642. Storr's classification of animals, III. 183.

STOTHARD (C Alfred), XX. 787; XVII.

(THOMAS), painter, XX. 738. Siour, river, XIII. 65; VIII. 111.

#### STO-STR

STOURBRIDGE, XX. 738; XXI 928—its brick clay, V. 345, 346; XIII. 721, XVIII 439

STOURPORT, XX. 738.

Stourton quarries, footprints in, XVII

STOVE, XX. 738-plant-stove, XI. 756stove-plants, 757-stove-grate, XVIII. 78-warming of apartments by stoves,

1b; XIX. 614—lamp stove, XIII 172 Srow (John), historian, XX 744—his Chronicle quoted, VI. 623-his Survey of London, XIII 673, Strype's edition of, XX. 783-his notice of the ship Princess Royal, 128

Stowe, in Buckinghamshire, V 722. Stowe-papers, XI. 59 Stowel (Loid) See Scott (William). STOWMARKET, in Suffolk, XX 744. STRABANE, in Tyrone, XX. 744; VIII

103, XXI. 408 STRIBO, XX. 744, X. 462—in geography, 467—his account of ancient navigators, 462-on mythological fables, VII 493on the Cietans, 496-on Aristotle's library, XIII. 383—his description of Rome, XIX. 360—on the boundaries of Syria, XX. 901; on the provinces of, 904-on the tides, XXI. 250-on the plain of Troy, 358

Strachey (Edward), his translation of a Hindu treatise on algebia, II 487 - (Sir Henry), on the state of India,

XI, 518, 521, 522, 523 (Captain R), on the glaciers of the Himalaya, X. 634.

STRADA (Famiano), XX. 745. STRADBALLY, town in Iteland, XX. 745
STRAFFORD (Earl of). See Wentworth

(Thomas). STRAHAN (William), printer, XX. 745.

Strahlstein, mineral, XV. 81. Strain, on tumber, VI 255, 256, on timber in 100fs, XIX. 375 et seq, mode of cal-culating, 385—strains to which a ship is hable, XX. 179—strains to which liable, strength is opposed, 755-on building

materials, 715.

Strair, XX 745; X. 483—various meanings of the word, VIII 11

Strairs, XX 745—tade of, XVIII

670-siege of, in the year 1715, XX 856 Stramonium Sec Datura

Stranding of a ship, what constitutes, XII. 422.

Strands, in rope-making, XIX. 401, 405 Strang (Dr), on the statistics of the factories of Lansikshire, VII. 451-on the population of Glasgow, X. 649—on the educational statistics of Glasgow, 653. STRANGE (Sir Robert), engraver, XX. 746;

VIII, 809. STRANGFORD, XX. 746.

(Lough), VIII 122 Strangling, death from, XIV. 430

STRANGAER, in Wigtonshire, XX. 746, XXI. 864. Straps, in carpentry, VI. 265

Strasburgh, XX. 746—population, X. 277—early printing at, XVIII 532—mesmeric societies at, XX 423—roof of Strasburgh railway station, Paris, XIX. 398.

Strata, or beds, in geology, XV. 156; XVII. 586-extent and termination of, XV. 158-contemporaneity of, on same horizon, 160-interstratification, association, and alternation of, 161-lateral variation of, 162—inclination of, 168—contorsions, 169—inversion of, 170 unconformable, 182-overlapping, ib.

Strategy, in war, XXI. 702. STRATFORD (Stony), XX. 747.

Stratford-le-bow, earthenware of, XVIII

STRATFORD-UPON-AVON, XX. 747-canal, XXI. 738.

Strathbogue, II. 83. Strathclyd, kingdom of, XIX. 743, 746. STRATHMIGLO, in Fifeshire, XX, 747. Strathmore, IX. 781; XIX. 792. Strathnaver, XX 840. Strathpeffer mineral well, XIX, 426.

#### STR-STR

Stratification of rocks, XV. 156, 158. See Strata.

- m tanning, XIII 307. —— of the electric light, XXI 630 Stratified rocks, XV. 194 et seq , XVII

Stratiomydæ, family of insects, IX 237. Stratiomys, genus of insects, IX 238. STRATO of Lampsacus, XX. 748. Stratus, cloud, XIV. 655

STRAUBING, in Bavaria, XX. 748. Straus-Durckheim, his work on the anatomy of the articulated animals, IX. 15

-on the laws of organic structure, 41 Strauss (Dr), on Christianity, X 616-on the impossibility of minacles, XV. 264 on myths, 1b, n —on the evidences of Christiamity, XVII 203.
 Straw, as manure, II 406—bleaching of,

IV 770—planting of, XI. 243—used for making paper, XVII 260

Straw-hots, XI. 242. Strawberry, V 135, 118, 124—culture of,

- tree, V. 198; XL 748. See Arbutus.

Stream-anchor, III 116.

Street's blowing machine, IV 796. Streets, width and direction of, III 494in ancient Rome, 471-street thorough-fares of London, XIII. 679-of Peking, XVII. 369-paving of, XIX 227 STREHLEN, Prussian town, XX 748.

Strength, muscular, improved by training,
VIII 25—instrument for measuring, 365-of men and animals, XIV. 416principles of strength in masonry, XX 715

et seq — passive, VI. 249—strength of cast iron, XII 566; malleable, 570-in structures, XIV. 380, 382 — principles which regulate, XIX. 374—transverse strength and resistance of stones, XX. 717-of timber, as the density, XXI 279.

Strepsidura, fossil mollusks, XVII 110. Strepsilas, genus of buds, XVI 804 Strepsiptera, order of insects, IX. 26, 220. Striata corpoia, III 54

Strated substances, colours of, VI 649. STRICKLAND (Hugh Edwin), XX, 782 Stricture, in pathology, XVII 690-of the methia, XX 831

Stridulantes, family of insects, IX 167 STRIEGAU, town in Silesia, XX 782 Strike among workinen, VII 161, 163, 164, 165, XIV 350

of beds, in geology, XV 168
String courses, in architecture, III 513,

Stringhalt in horses, XXI. 576 Stringocephalus, fossil mollusks, XVII.

Strings (musical), theory of, II 110. Strix, genus of birds, XVI 746. Stroblus, in botany, V. 115 Stroganowite, mineral, XV. 73. Strokr, Great and Little, Iceland, XII 201. Stromateus, genus of fishes, XII 298, 293 Stromatopora, fossil sponges, XVII 92. Strombeck (Baron Von), on animal magnetism, XX. 444.

Strombidæ, family of mollusks, XV. 388fossil, XVII. 109.

STROMBOLI, XX. 782, 246, XIII. 502. Strombus, genus of mollusks, XV 388. Stromeyer (M), his discovery of cad-mium, VI 51.

Stromeyente, mineral, XV, 118 STROMNESS, in Orkney, XX. 782. Stromnite, mineral, XV. 95 Stromb, one of the Faroe islands, IX. 484. Strongbow, XII 467, XIII. 81; VIII 217 Strongylium, genus of insects, IX. 132 Strongyloceros, fossil deer, XVII 171. Strongylus, XXI. 980—in the domestic

animals, 574. Stronsey, one of the Orkney islands, XVI. 718, 719.

Strontia, XV 65—nitrate of, used to produce red fire, XVIII 706. Strontianite, mineral, XV. 95.

## STR-STU

Sti ontites, XV. 623. Strontium, VI 486

Strophalosia, fossil mollusks, XVII. 105 STROPHE, in poetry, XX. 782

Strophioles, in botany, V. 140 Strophodus, genus of fossil fishes, XII.

Strophomena, fossil mollusks, XVII. 104 STROUD, oi Stroudwater, XX. 782, X 682. Structures, theory of, XIV 380 STRUENSEE AND BRANDT (Counts), XX. 782,

VII 742. Struthio, genus of birds, XVI. 795 Struthum, IV 757.

Struts, in carpentry, V. 748, VI 259 XIX. 383—distinguished from a tie, VI 373.

Strutt (Jedediah), III 610, n 1, VII 442,

(JOSEPH), XX. 782 — on English sports, XVII 714

- (Joseph), his public park at Deiby, VIL 753

Struve (F G Wilhelm), on double stars, I 861, IV. 85-multiple stars, 1b-his measurement of an arc of meridian, L. 854, IX 552-his leasoning on the Milky Way, I, 845, n 3—on Sir W Herschel's discovenes, 846, n 2—lus connection with the Dorpat and Pulkowa Observatories, III 819, 820-on the constant of aberration, IV 22-on Jupiter's satellites, 71-on Saturn's ring, 72-on Jupiter, 91-his catalogue of stars, 95on the parallax of a star, 96.

· (Otto), astronomical observations made by, I. 861-on the solar motion, IV 87—on Saturn, 92 Struvite, mineral, XV. 96.

Struyck (Nicolaas), on the population of Holland, XV 602, 662

Strychnine, effects of, on the spine, XVII. 702.

Strychnos nux vomica, V. 200; XIV 438 STRYPE (John), XX. 782.

Strzlecki (Count), his exploiations in the interior of Australia, IV 256-on the native women of Australia, 260 Stuard's patent anchor, III. 118.

(GILBERT CHARLES), painter, XX.

(JAMES), XX. 784—his Antiquities of Athens, III 455—on the Tower of the Winds, VII. 774.

(General Sir John), V. 602. — (Mr), on the effect of an allowance to the poor, XVIII, 310, n. 1. STUARTS (The), XX. 783. See Scotland

and Great Britain.

Stub (Ambrosius), Danish poet, XIX. 693 Stubbs on hats, XI 240 Stubner, Anabaptist leader, II 742.

Stucco, V. 742-plastering of walls with, 744-decay of, on walls, ib. -stucco work of the ancients, XIX, 844

Stud of race horses, XI. 641-general studbook, 645.

Students, in universities, XXI. 445 et seq Stuff hats, XI 240. STUILWEISSENBURG, in Hungary, XX. 784.

STUKELEY (William), XX. 784.

Study, in sheep, XXI 576.
Sture (Steen), XX 846
Sturgeon, fish, XII. 317—as an article of food, IX. 763—pyloric appendages, III.
111, 112—isinglass from, XXI. 628. See Caviare

Sturionidæ, family of fishes, XII. 317. Sturionii, fossil fishes, XVII. 125. STURM (J. C. Françols), XX. 784 - (Jacques), his works on insects, IX.

—— (JOHANN), or Sturmius, XX. 784. Sturmus, genus of birds, XVI. 763 Sturt (Captain), his explorations in Australia, IV. 255, 256.

### STU-SUC

Stuttering, XX 534-distinguished from stammering, 533.

STUTTGART, in Wurtemberg, XX. 785hbrary of, XIII 421 Styca, Anglo-Saxon com, VII 71

Stygia, genus of insects, IX. 212, 233. Style, in architecture, III 513—in botany, V. 118, 130, 132—in jomery, 751, 752—in design, XVII 65

- in language, Addison's, I 162-his definition of fine writing, ib —principles of prose style, XIX 140, 129

Stylephorus, genus of fishes, XII 303. STYLLS, in chionology, XX 785—old and new, VI 89, 668, I 529

Stylewort, order of plants, V 197 Styludiacee, nat order of plants, V 197. Stylina, genus of mollusks, XV 384 - fossil cotals, XVII 97

STYLITES (Suncon), XX 785 Stylobate, in architecture, III 513—Doric, 463—Ionic, 465, 475—Counthian, 466,

Stylophornæ, zooplytes, XXI 1005 Stylops, genus of insects, IX 220

Stylus, use of in ancient painting, XVII. Styracacem, nat. order of plants, V. 198.

STARIA (Duchy of), XX. 785, IV. 311, 309—scenery of, 312 STYX, XX 785

Suabia, in Bavaria, chief towns of, IV 518. See Swabia

Suabian dynasty, XX 257, 263 SUAKIN, in Nubia, XX. 786—trade of, XVIII. 819

Suard (M), his character of Corneille, I. 135, n. 3. SUAREZ (Francis), Jesuit, XX. 786 — on

the will of God as a rule of conscience,

XV. 550. Sub-genus, V. 175. Subalternation, in logic, XIII. 604. Subclavian artery, III 65

Subraco, Italian town, XX. 786—early printing at, XVIII 532. Subjective and objective, explanation of these terms, XIV. 560, n—subject and

subjective, XVI 401

Subjects, their duty to the State, XV. 570. Subjunctive mood, X 766, 790. Sublantay, IV 553.

Subordinaries, in heraldry, XI. 329.
Subpona, XX 786.
Subsoil, II 398, XV. 216—analyses of,
II. 393, 400. See Soil

Subsoil-ploughing, 11. 400-plough, 271. Substance, mistaken application of the word, I 242. See Matter

Substantive noun, X. 746, 789. Substitution, in chemistry, VI. 504. Subteriancous irrigation, XII. 618.

Subtraction, in arithmetic, III. 584—of vulgar fractions, 598—of decimals, 600, 602, 603—in algebra, II. 490, 494. Subulicornes, family of insects, IX. 175. Subulipalpi, family of insects, IX. 100. Succadana, in Borneo, V. 47.

Succession, French law of, VII 432-war of the Spanish, IV. 303; V. 448; XII. 652; of the Roman (A.D. 68), XIX. 338 (see Primogeniture)-duties on successions, XXI. 65, 66

Succinea, genus of mollusks, XV. 373.

Succinite, mineral, XV 124. Succory, culture of, XI. 744 See Chicory. Sucner (General), XX 786; X. 118, 139 et seq -his Spanish campaign, V. 613; XXI. 825, 826.

SU-CHEW, Chinese city, XX. 786. Suchosamus, genus of fossil reptiles, XVII. 152.

Suck, river, X. 389.

Suckers, sub-order of fishes, XII. 227.

of insects, IX. 34, 35.

of plants, V. 79—propagation by, XI. 694.

Sucking, operation of, XVIII. 76. Sucking-fish, XII. 270. See Echeneis.

Sucking-pump, XII. 174. SUCKING (Sir John), XX. 786—character of his poetry, XVIII. 122.

## SUC-SUL

Sucre (General), IV. 833, 836, XVII 468. Suctoria, order of insects, IX. 26, 260. SUDBURY, in Suffolk, XX 786, 790, 791. Sudebnik, code of Russian laws, XIX 475 Sudermania (Duke of), revolution in Sweden in favour of, XX 859.

Sudetic mountains, IX 382; XX. 274. Sudras, Hindu caste, VI. 318; XI. 471. 

SUEUR (Le), panter, XX. 788; XVII 76 SUEVI, XX 788, X 572—their irruption into Spain, XX. 459 Suez, Egyptian seaport, XX 789; VIII. 424; XVIII. 818—shipping of, XXI.

385

(GULF OF), XX 789; XVIII. 817, 818.

(ISTHMUS OF), XX. 789—railway and proposed canals across, VIII. 430. SUFEID KOH, mountain range, XX. 790. Suffocation, VIII 181; XIV. 430.

SUFFOLK, XX. 790-drill, II. 274-338—duns, 342—population and value of property, VIII 754
—— in Massachusetts, XIV. 342.

Sufis and Sufism, XV. 756.

Sugar, XX 791, V. 73; VI 515, 516. VIII 47; XIX 611—of Bengal IV 649-Bourbon, V. 248-Brazil, 294 France, X. 248, 256—Hindustan, XI 453—Guiana, 82—Mauritius, XIV. 363— Mexico, 717—sugar estates in Jamaica, XII. 680-production of, in West Indies, since the abolition of slavery, XX 327 -imports of, from India, XI, 462-—impores 61, 170m India, XI. 402—
grape sugar, II. 380; V. 320, VI. 516;
VIII. 47; IX. 756; XXI 889—cane
sugar, II 380; V 216, VI. 516, IX 756
—manna sugar, VIII. 47—liquonee, ib -beet-100t sugar, II 334-maple-sugar, quantity produced in Canada, VI 142, 147—sugar of milk, XV. 11, 1X 756—sugar-yielding vegetables, 759—ants fond of, IV. 263—in wheat, 379—in barley flour, V. 330—in malt, 324—as a substitute for health and the state of the sta substitute for bailey malt in brewing, 336—effects of feeding a dog solely on, VIII. 18—its nutritious qualities, 20 its use in curing gravel, 24; and in preserving food, IX. 767—the source of ardent spirits, VIII. 47—optical pro-perties of, XVI. 681—Mi Howard's process of boiling in vacuo, XX. 556—duties on, in France, XXI. 72—sugarfactories in Piussla, XVIII. 665, 666, 669—in Belgium, IV 625. See Sugarcane.

Sugar-ant, III. 261, 263 - means of destroving, 266.

Sugar-candy, VL 172; XX. 791, 795, 796,

Sugar-cane, V. 216; IX. 759—often injured by ants, III 264—in Jamaica, XII. 682 Louisiana, XIII. 700—Nicaragua, XVI. 244. See Sugar

Sugden (Mr). See Leonards (St Lord). Suggestion, its meaning as employed by Reid and Berkeley, I. 167—and by Dr T Brown, 416-law of, XIX. 115. See Association of Ideas.

SUHARUNPORE, in India, XX. 799. SUHL, Prussian town, XX. 799.

SUMM (Peter F. von), Danish author, XX. 799.

SUICIDE, XX. 799-common among the North American women, II. 681-no crime with the Chinese, VI 595—in Japan, XII. 698—Prussia, XVIII. 664— Socrates' opinion of, XX 393—suicidal mania, XIV. 532.

SUIDAS, Greek lexicographer, XX. 801-Küster's edition of, XIII. 187. Suir, Irish river, XIII. 84; XVIII. 728. Suit, or action, in law, II. 119.
Sujah Dowlah, XI. 487, 488.
Sula, genus of birds, XVI. 814.
Sulina mouth of the Danube, VII. 684. Suliotes, II. 442, XI. 28, 24. Sulitelma, mountain, XIIL 95, 284; XVI. 820; XVIL 643.

SULLA, Roman dictator, XX. 801; XIX.

### SUL-SUN

321; VI. 222, XIV 306, XV 284-an apparition seen by, III 310-his engagement with Archelaus, 685—capture of Athens by, IV 172-support given to, by Pompey, XVIII 288

Sullivan (D1), on peat, XVII. 358
Sulliv (Maximilien De Bethune, Duke of), XX. 801-anecdote of, IV 528-on the expense of collecting the revenue in

France, XXI 42 SULMONA, town of Naples, XX. 801.

Sulphate of copper, used for preserving timber, XX, 167.

——— of hme, IL 304. See Gypsum.
—— of magnesia, as manure, II 413.
Sulphated urine, IL 407.

SULPHUR, XX. 801; VI. 474with oxygen, 475; with hydrogen, chlorine, and carbon, 477—localities where it occurs, XVII. 624—in mineralogy, XV. 64, 122-in pyrites, 246sulphur-salts, 62—proportions of, in gun-powder, XI 151—specific gravity of, in Japan, 689; Sicily, XX. 247 on the shores of the Dead Sea, III. 761—sulphur-caves, in Arabia, 357—effects of, in coal gas, XIX. 616—duty on, XXL 60

Sulphureous springs, in Derbyshne, VII. 755

Sulphurets, VI 474, 483, 484-of barium. 486-antimony, 494-arsenic, 495-bismuth, 496—copper, 497—silver, 498—iron, 439, 490—lead, 497—magnesium, —487—potassium, 485—strontium, 487—sodium, 486—tin, 493—zinc, 491—alkaline, their poisonous qualities, XIV. 434 See Chemistry.

See Chemistry.

Sulphuretted hydrogen, found in the atmosphere, II. 376—poisonous quality of, XIV. 436; XVIII. 135—spilings impregnated with, XVII. 602

metals, XV 114.

micaus, AV 114.

Sulphura caid, VI. 475—in plants, II 388
—cimployed in bleaching, IV. 758—as
an absorbent, VII. 105—its poisonous
qualities, XIV. 435—Dr Roebuck's manufacture of, XIX. 244.

Sulphurous acid, VI. 475—poisonous quality of, XIV. 43; XVIII. 135—specific gravity of, XII. 89—in the smoke of London, XX. 712.

SULPICIA, Roman poetess, XX 801. SULPICIUS (Severus), XX 801—his connection with Vigilantius, XXI 587.

Sultanas, Turkish raisins, XVIII. 799. Sultanpur, in Oude, XVII. 17. Sultans of Turkey, XXI. 376.

SULZER (Johann Georg), XX. 802. - (Mr), his experiments on the clasticity of air, XVIII. 53.

(John Henry), his work on insects, IX. 5.

Sumach, Venetian, V 190-a brown dyestuff, VIII. 307-used in tanning, XIII. 306.

SUMAROKOV, XX, 802: XIX, 547. SUMATRA, XX. 802—cannibulism in, III. 270—edible birds' nests in, IV. 727—filigree manufactures, IX. 579—language, XIII. 207-volcanoes, XVII. 589 height of mountains, 645, 646-reptiles, XIX. 50, 53, 54, 68, 72, 73-varia-

tion of the needle, XIV. 54. Sumatra-camplior order of plants, V. 185. SUMBAWA, East Indian island, XX. 806 -volcanoes, XVII. 589.

SUMBULFORE, in Bengal, XX. 807. SUMMER, XX. 807.

Summer-lightning, VIII. 587.

SUMPTUARY LAWS, XX. 807.
SUN, XX. 807; IV. 11, 86; I. 841—dependence of magnetic periods on, 996 motions of, IV. 4—oval appearance of, in the horizon, 10—its apparent circular motion in the ecliptic, 11—its orbit, 15 its diameter, 16 — variation of its motion, ib.—describes areas proportional to the times, ib -- eccentricity of its orbit, 18-equation of the centre, ib.-

## SUN-SUR

of its orbit, 19-determination of its place in its orbit, ib .- its parallax, distance, and volume, 20-spots, 25, 28, 29, 88-rotation, ib -constitution and physical peculiarities of surface, 25, 30, 87, 88-position of its axis, 27-supposed atmosphere, 30, 179—eclipses of, 47—transits of Venus and Mercury over its disk, 62-force by which it disturbs the motion of the moon round the earth, 102—to find how much its rising is advanced by refraction, 112—its mean motion, 127—equation of its centre for 1801, 128-its declination for 1801, 132 -elements for the projection of its eclipses, 138-heat of its rays, VI. 2, 775 et seq -quantity of light received from it in different latitudes, 766its obliquity a source of cold. VII 100 XIV. 637-tables of its longitude and declination for every day in the year, &c, 797-electricity of its rays, VIII -properties of its rays, XIII 452magnetism of its rays, XIV 12—magnetic influence of, 66, XVI, 595—as a source of heat, XIV 637—method of measuring the direct heating-power of its rays, 638—bands of light passing through, 681—coronæ and halos round the, 1b, 682 (see Corona)—to take its altitude, XVI. 32, 33 — to reduce its declination, 36—influence of, on the tides, XVII 580—effect of its heat on the earth, I. 950—total quantity received by the earth from, ib.—solar year, VI.
76—solar cycle, 80—mock-sun (see Halo, Parhelia, Cotona). See Light, Optics, Spectrum, &c Sun Fire Office, XII 417

Sun-fish, XII. 322; IX. 634. See Basking Shork

Sun-worshippers, their rule in Egypt, VIII.

Sundas, people, XII. 702, 709-language, 707.

Sunday, I. 502, n.-institution of, XIX 562—origin of the name, I. 458, n.; VI Sec Sabbath.

schools, in England, VIII. 746, 747, for adults, 747—in Manchester and Salford, XIV 257—in Scotland, XIX. 803.

Sunderbunds, in Bengal, IV. 648, 651; X. 400: XI. 449

SUNDERLAND, XX. 807-iron bridge at, TIL. 414-docks, VIII. 75-coal trade of, 266.

Carl of), V. 436.
Sundew, order of plants, V. 188.
Sunum, XX. 808. See Colonna (Cape).] Sunnhemp, XI. 311. Sunstone, XV. 71.

Supercargo, IL 236.

Superficies, X. 506, 507. Superheating of steam, XX. 647-appara

tus for, 650—condenses freely, 655 Superior (Lake), XX. 808; VI. 138; XVII. 605.

SUPERLATIVE, in grainmar, XX, 808, X,

Superphosphate of lime, as manure, II. -mode of preparing it, 299-from fossil bones, 300—from the remains of cetacea, XVII 166—analyses of, II 411. Superstition, monomania of, XIV. 533-its

connection with infidelity, XX. 382. Suphis L and IL, Egyptian kings, VIII. 454.

SUPPER, XX. 808.

- (The Lord's), L 511-not a fresh sacrifice, but the celebration of one already made, 512—how regarded by Quakers, XVIII. 716—the real presence in, 821-use of leavened or unleavened bread, I. 525. See Eucharist.

Supporters, in heraldry, XI. 888. Suppuration, in wounds, XX. 823. Supralapsarians, XVIII. 478. SURAT, in India, XX. 808; XI. 92. Surbase, in architecture, III. 513. Surcost, in heraldry, XI. 321. Surds, in algebra, II. 499. Surenas, XVII. 311. Surf of the sea, XVII. 582.

### SUR-SUT

Surfaces, X 506, 507-equations to surfaces of the second degree deduced from their properties, 558 - tangent planes and normals to, 560-on the cuivature of, 561-generation of, by the motion of lines, 562-cylindrical, comcal, and conoidal, ib, 563-of revolution, 1b -of simple and double curvature, VII 59, 62

Surgeon, qualities necessary in a, XX 821 —in the navy, XVI. 102, 112, 114— London College of Surgeons, VII 114, XIII 672-Edinburgh College of Suigeons, VII 114; VIII 400—barber-surgeons, IV. 432—Paris College of Surgeons, foundation of, XX. 816

SURGERY, XX. 809, XIV 448, 449, 461— academies of, II. 62—application of anatomy to, 766-use of chloroform in, VI 628 - knowledge of, in ancient Egypt, VIII 442-its province defined, XIV. 449—included in physic, 448—sub-divisions of, 463—in Ireland, VIII

Surgical instruments, manufacture of, VII 601; XX. 96

Surnkate, in zoology, XIV 167 SURINAM, rivel, XX. 835; XI. 84.

on Dutch Guana, XI 84-toad, XVII 634; XIX 81-serpents, 72. Surmullet, family of fishes, XII 278.

Surnames, the most common in England and Wales, XVIII 836

SURPLICE, XX, 885.

SURREY, English county, XX. 835-population and value of property, VIII 751. - (Earl of), his translation of part of the Æncid, VIII. 119-poetry of, XVIII.

Surtees (Dr W. E), on Loid Eldon and Lord Stowell, XIX. 813, 825, 826.

Survey, trigonometrical, IX 551-of Great Britain, XXI. 330 SURVEYING, XX 838; XXI 346.

Surville (Capt.), his visit to Solomon's Islands, IV. 265, and to New Zealand,

SURVIVORSHIP, XX 838-presumptions of, XIV 426. See Annuities, Mortality. Surya Siddhanta, Hindu work on trigo-

nometry, X 503. Sus, genus of mammalia, XIV. 197.

Susa, ancient Persian city, XX, 838—taken by Alexander, XIII, 768—his residence there, 771.

- in Sardinia, XX, 838.

——— scaport in Tunis, XX. 838. Susannite, mineral, XV. 105. Susarion, the Greek drama improved by, VIII, 134\*.

Suse, territory of, XV. 595. Suspension-Bridge, XX. 838. See Bridge

(Suspension). Suspicion, monomania of, XIV. 533.

Susquehannah, river, XIV. 330, XVII. 395, 647. SUSSEX, XX. 838--population, and value

of property, VIII. 754—superiority of its oak trees, XXL 268. Stissmileh on mortality, XV. 601, 633-on

the diminution of marriages, XVIII. 248

Sustentation Fund of the Free Church. XVIII. 495.

SUPHERLAND, XX. 840 — physical geo-graphy of, XIX 794—agricultural sta-tistics, 796, 797, 798—population, 799 salmon fishery, IX. 592, 596, 597, 598, 610-sheep farming in, IL 350.

- (Dukes of), their improvements in Sutherlandshire, XX. 842.

(Mr), on the herring fishery of

Dunbar, IX. 635, n. 2.

SUTLEJ, or Sutluj, river, XX. 843; XVI I. 687, 688—origin of, XIV. 269—vailey of the, XI. 441, 448—climate of, 450.

Suttee, no sanction for, in the Vedas, XVII. 541.

Sutton (Charles Manners), elected speaker of the House of Commons, V. 822-14s re-election, 603-his retirement from the office, 664.

- COLDWIELD, XX. 843.

### SUT-SWE

Sutures of bones, II 830-of the skull, III. 27, 29—frontal, 16—sagittal and coronal, 19—in the mammalia, 77—in birds, 85-in botany, V. 128.

Suwaroff, (Field-Marshal), X. 111 et seq , XIX. 489—his Italian campaign, III. 649 : V 567.

Suwarrow-nut order of plants, V 186 Svanberg's measurement of an arc of meridian, IX. 551.

SVEABORG, or Sweaborg, in Finland, XX 843—bombardment of, by the British in 1555, XIX. 511, IX. 831.

Sviatopolk, XIX. 471.

Sviatoslav, king of Russia, XIX. 470 SWABIA, XX 842—dialect, X. 587—origin of the name, XX. 789. See Suabia and Snahan

SWAFFHAM, in Norfolk, XX 843.

Swainson (William), his works on insects, IX 14—on the classification of the mammalia, XIV 132, n 1—on bilds, XVI 732, 823-on a genus of entozoa, XXI 973-on the boas of South Ame rica, XIX. 61, n 3.

Swalbacius (J. G.), on birds, XVI. 725. Swallow (Mr.), his improvements in ropemaking, XIX. 414

Swallows, XVI. 757, 758—hybernation of, III 181, XII 62—edible swallow's nests, IV 727; in Ceylon, VI 394, Java, XII

SWAMMERDAM (John), XX. 844-his anatomical researches, II 763—on ants, III 261—on bees, IV 571 et seq—his works on insects, IX. 3-his arrangement of the articulata, ib -on the metamorphoses of insects, 54

Swan, XVI 815—age attnmed by, II 234
—black swan, IV 261.

- (Joseph), his plates of the brain IIL 74

- River Settlement, IV. 254, 298. Swan-pan, Chinese computing table, II. 8. Swan's variation compass, XIV. 80. SWANAGE, in Dorsetshiie, XX. 844 SWANEVELT (Hermann Van), painter, XX.

Swanlinbar, in Cavan, VI 348 SWANSEA, XX. 844, X. 642—branch of Bank of England at, XV 470—valley railway, XX 845

Swarming of ants, III. 265-of bees, IV.

SWARTZ (Olof), botanist, XX 845. Swayne (Rev. G.), on the culture of the fig, XI. 708

Swealand, or Sweden proper, XX. 864 Swearing, love of, VIII. 249. Sweating sickness, VIII. 694; XIII. 659.

SWEDEN, XX. 845; IX. 402—Royal Swed-ish Academy, II 66—Academy of Fine Arts, 68-alum works, 637, 640-Swedish skull, III 29-army, and martial qualities of the Swedes, 650-balance, IV. 386—elevation of its coasts, 403—Sir John Moore's expedition to, V. 603 colonies, VII 149—union with Denmark and Norway, 739; XVI 317—union with Norway, 318—wars with Denmark, VII. 741—ballads of, IV. 397—Bibles, 702—iron ores of, VI 178, XII. 541—trade with England, VIII 741, with France, X 259—insects, IX. 65—Jews in, XII. 783—language, XIII. 211—lib raries, 427-gradual elevation of the land, XV 167—silver mines, 286—copper mines, 239; XVII. 621—lead, XV 242-metallic produce, 248-coins, 442, 445; XVI. 389—population and mortality, 603, 605, 606, 627 et seg, 638, 646 et seq.; XVIII. 350-monarchy, XV. 414vaccination begun in, 639-newspapers. XVI. 202-birds, 730-the Reformation. XVIII. 827—postal system, 424—roads, XIX. 229—wars with Russia, 475 et seq.; V 530-modern literature, XIX. French school, 699—new school, ib -romance and novel writers of, 701reptiles, 15, 52—large Swedish ship in the sixteenth century, XX, 126—navy, 138 - bear-hunting, 211 - capercalizieshooting, 226-stoves, 789, 740-Telford's

#### SWE-SWO

engineering survey, XXI. 145—universities, 492—weights and measures, 813—map of, XX. Plate.

SWEDENBORG (Emanuel), XX. 867theosophic mysticism, XV. 758 SWEDENBORGIANS, XX 868.

Swediaur (Dr), on ambergris, II. 657. Swedish Lapland, XIII 234. Swedish-turnip, XI 740—sowing of, II 317. See Turnip.

SWEERTS (Jacques Thierri), general, XX.

Sweet-bay, plant, V. 204; XI 748 Sweet-flag, order of plants, V. 214

Sweetsop, plant, V. 181 Sweno, king of Denmark, his treaty with Malcolm, XIX. 745

Sweno's stone, near Forres, XV. 577. Sweiker, king of Sweden, XX 845 Sweyn, king of Denmark, his intoads on Britain, VIII 661. SWIETAN (Gerard Van), physician, XX.

Swift (Jonathan, D D.), XX. 869—possible source of his idea of Gulliver's voyage to Laputa, II 168—his Meditation upon a Broomstick, V 258-perhaps derived hints from Aristophanes, VIII. 139-his monument, 221—his Drapier's Letters, XII, 493, 527—his Examiner, XVI. 183 on the effects of the newspaper stamp, 184-his poetry, XVIII. 124-his intercourse with Pope, 332—Sterne's imita-tion of, XX. 693—his letter to Lord Carteret regarding Bishop Berkeley, IV. 674-his abuse of Vanbrugh, XXI. 518

—— bird, XVI 758 Swilly (Loch), VIII 105. SWIMMING, XX. 878—air-jacket, II 430 cork-jacket, VII. 369, XIII 440-India rubber belts for, ib .- utility of the ait, 439-repulsion the cause of some bodies swimming in fluids specifically lighter than themselves, XX. 753.

Swimming-birds, XVII. 634. See Palmipedes.

Swinburne (Mr), his account of the Alhambra, II. 577, and of the Moffets, 732on the fountain Arethusa, III. 522.

Swinden (Van), on magnetism, XIV. 6, SWINDON, in Wiltshire, XX. 881.

Swine, XIV. 197-in Dumfriesshire, VIII. 238-in Scotland, XIX. 798. See Hog SWINEHUNDE, Prussian town, XX 881 SWINESHEAD, town in Lincolnshire, XX. 881.

SWINFORD REGIS, in Staffordshire, XX.

Swing-bridges, XVI. 79. Swing-plough, II. 270, 271. Swinton (Sir John), VI. 116 Switches, on railways, XVIII 776, 768

SWITZERLAND, XX. 881; IX. 400-trout of the lakes of, III. 157, 158; XII 242 -salmon in the rivers of, 238-conquered by the French, V. 563, X. 108 ats importance to them, V. 567-disadvantage of its situation for cotton manufacture, VII. 459-French trade with, X. 259 and n-Swiss Confederation, IX. 498—condition of the Jews in, XII. 782, 783—hbranes, XIII 424—variation of the needle, XIV 54—cretmism in, 539—coins, XV. 242, 445; XVI. 389 miocene rocks of, XV 214—glaciers, X. 633—heights of mountains, XVII. 642, 643-lakes, 591-increase of population, XVIII. 348—postal system, 424—Presby-terianism, 486—railway statistics, 787 the Reformation, 821-Ranz des Vaches,

806—savings-banks, XIX. 678—silk manufacture, XX. 278, 279—French policy towards, in 1847, X. 230—metallic produce of, XV 248—universities, XXI. 492—weights and measures, 818wines of, 886-map of, XX. Plate. See

Swooning-fits of animals, XXI. 574. Sword, IX. 501, 502-Roman, III. 632ceremony with, on the creation of a knight, XIII. 112-manufacture of, at Toledo, XXI 302.

### SWO-SYM

Sword-fish, XII. 293, 295, 297-mode of fishing for, XX 246.

Swords, town in Ireland, XX. 891 SYBARIS, ancient city, XX. 891-coins of, XVI 363.

Sybines, genus of insects, IX 140 Sybistioma, genus of insects, IX. 243 Sycamore tree, XVII 759, 761, V. 186-embryo of, 167—Egyptian, IX. 536wood of, XXI. 278

Syconus, in botany, V 139. SYDENHAM (Floyer), translator of Plato, XX. 895

village in Kent, XX 891. (Lord), on Canada, VI 134 — (THOMAS), XX 892; XIV 460— Locke's commendation of his work on Acute Diseases, L. 101-Dr John Gre-

gory's remarks on, ib., n 2 SYDNEY, in New South Wales, XX. 895; IV 271 et seq —Sydney Cove, 271—chmate, 279—college, 283—newspapers,

SYENE, in Egypt, XX. 897-antiquities at,

VIII 514
Syemte, XV 137—soils from, IL 390. Syennesis of Cyprus, II 749 Syepoorite, mineral, XV. 116. Sykes (Colonel), on a fog-rambow, XIV.

SYLBURG (Friedrich), XX. 897. Sylla (Lucius Cornelius) See Sulla. Syllis, genus of annelides, XI 298.

SYLLOGISM, XX 897, XIV 598-Kant on, ib, n 2-doctrine of, XIII 607-form of, ib .- figure and mood of, 608-first syllogistic figure, 1b—canons of, 610, 611, 627, 628—breaches of the six syllogistic rules, 612, n—reduction of, 614, 616, 617, uses of, 627-analysed in extension and comprehension, 618functions of, 623-hypothetical and disjunctive, 631, 632 - Aristotle on, III. 558, 554.

Sylvanus, VII 804. - genus of insects, IX 142. SYLVESTER (Joshua), poet, XX. 897.

II, on arithmetic, III. 581.

Sylvester's rope-machine, XIX 406— method of protecting the surface of building-stone, XX 735—mode of heatmg rooms, 743.

Sylvia, genus of birds, XVI 755 Sylvin, mineral, XV 97 Sylvius (Jacobus), anatomist, IL 757. Symbols, chemical, VI. 451—botanical, V 176

Syme (Mr), his mode of operating for stricture, XX. 832 Symes on the natives of the Andaman

islands, III 124 Symington (D1), on the Atonement, XXI.

Symington's steam-boats, I. 869; XX. 637,

SYMMACHUS (Quintus Aurelius), XX. 898; II. 663-orations of, XVII. 211. - his Greek version of the Scriptures.

IV. 700, XIX 840. Symmer (R), on electricity, VIII 528 Symmetry, violation of the law of, in ani-mals, III. 91.

in flowers, V. 117, 119, 120. Symnel (Lambert), VIII 695. Symonds (Capt T. E.), on Irish fisheries,

IX. 682. (Mr), on the mechanics of lawmaking, XIII. 271, 273.

- (Sir William), XX. 898—his improvements in the navy, XVI. 98; XX. 184, 185, 187. Sympathetic ink, VII. 545; XII 384.

- nerve, great, III. 58-functions of the sympathetic nerves, XVII. 675 Sympathy, Adam Smith's theory regarding, I. 375, 376; XV. 545; XX. 339 whether an incentive to virtue, XV. 564.

Symphony, XX. 898. Sympiezometer, IV. 458. Symplesite, mineral, XV. 102 Symplocaceæ, nat. order of plants, V. 198. Sympterygia, genus of fishes, XII. 327.

## SYM—SZE

Symptom, argument from, XIX. 123. SYNÆRESIS, XX. 898.

SYNAGOGUE, XX 898; XII 768-synagogues converted into churches in apostolical times, I. 490, 491 Synagris, genus of insects, IX. 197. Synallaxis, genus of birds, XVI 768.

SYNALGEPHA, in grammar, XX 898 Synanceia, genus of fishes, XII 283. Synapha, genus of insects, IX. 228. Synaptidæ, echinodeims, XXI 986. Synbianchidæ, family of fishes, XII. 231. Synbranchus, genus of fishes, XII 231. Syncellus, Byzantine author, VIII. 452 Syncope, XVII 701—death by, 702 Syndosmya, genus of mollusks, XV 350— fossil, XVII 108

Synecdoche, in thetotic, XIX. 134 Synesius, his admiration of Hypatia, XII

Synetheres, genus of mammalia, XIV 187 Synchiates, genus of mammana, AIV 18/ Synchiata, genus of insects, IX 142 Syngnatha, myriapods, XV. 749 Syngnathidæ, family of fishes, XII. 315. Syngnathias, genus of fishes, XII. 315-

fossil, 338 Synod, Scotch, XVIII. 493 - of United Original Seceders, 502-Reformed Presbyterian of Ireland, XII 532 Synodendron, genus of insects, IX. 128. Synodic month, IV 38.

Synodontis, genus of fishes, XII. 258, 259,

Synovial membrane, II 840-affections of,

SYNTAK, in grammar, XX. 898, X 744 SYNTHESIS, XX. 898.

Syntomis, genus of insects, IX. 210. Syntomium, genus of insects, IX. 210. Syphax, XIV. 331; AVI. 350.

Syphilis, poem of Fracastorio on, IX 860. Syphon, XII. 69, 82; XVIII 49, 50— oscillations of water in, XII 162; XIX.

- fountain, XVIII. 49 - barometer. IV. 450.

Syphostoma, genus of annelides, XI. 296. Syr Daria, river, XII 711

SYRA, Greek island, XX. 898 SYRACUSE, XX. 899, 244—besieged by the Carthaginians, VI. 283, 285—taken by the Romans, XIX. 311-coins of, XVI.

366, 367. Syria, XX 901; III 734, VIII 470, 477, 478, 479 - great part subjugated by Saladin, 480-revolt in, 482, 484-El-Muciyad Sheykh's campaigns in, 486 -ceded to Mohammad 'Alee in 1833. 495-Druses of, 197-conquered by Timur, XXI. 283--Syrian months, VI. 671-coins of, XVI. 378-deserts of, XVII. 614—carthquakes, 616—height of mountains, 644-abundance of lizards in, XIX. 27-branch of the Caucasian

in, A.X. 2:—branch of the Catastan race of man, II. 775. See Palestine.
Syriac alphabet, II. 614—Bibles, IV. 700;
XIX. 639—language, XIII. 209.
Syringa, order of plants, V. 192—genus of plants, XVII. 764.

Syringe, XVIII 30 et seq. Syringopora, fossil corais, XVII 97. Syrmia, XX. 327.

Syrnium, genus of birds, XVI. 746.

Syrphici, family of insects, IX. 238. Syrphus, genus of insects, IX. 240. Syrrhaptes, genus of birds, XVI. 792.

Syrtis, genus of insects, IX. 162. Syrtis, genus of insects, IX. 162. Syrup, XX. 795 et seq.—fruits preserved in, IX. 767. Système Beaufumé, for preventing smoke,

Systropha, genus of insects, IX. 199. SYSTYLE, in architecture, XX. 912; IIL 513.

SYZRAN, Russian town, XX. 912 Syzycy, in astronomy, XX. 912; IV. 82

SZALONTA, in Hungary, XX. 912. SZARRAS, in Hungary, XX. 912. SZASZ REGEN, in Transylvania, XX. 912. SZATHMAR, in Hungary, XX. 912. Szechenyi (Count Stephen), Hungarian

author, XII. 20, 28.

INDEX.

#### SZE-TÆ

Szegedin, in Hungary, XX 912 Szekeily-vasaihely, in Transylvania, XIV 313 SZFNTA, in Hungary, XX. 912. SZENTES, in Hungary, XX 912. Szerelmey (Mr), his method of protecting the surface of building stones, &c., XX. 735. SZEXARD, or Szegszard, in Hungary, XX.

912 Szigeth, in Hungary, XX. 912. SZOLNOK, in Hungary, XX 912.

Szu-chuan, in China, XX. 29.

# T

T, letter of the alphabet, XXI. 1-in abbreviations, II 20 Taban-tree, V 199. Tabanu, family of insects, IX 231. Tal anus, genus of insects, IX. 231. Tabard, in heialdry, XI. 322. Tabasco, Mexican State, XXI. 1; XIV 726, 718. Tabaxir, or Tabascheer, IV. 407. TABERNACLE, XXI. 1. in architecture, III 513. Connection, religious body, XIV. 693. TABERNACIES (Feast of), XXI. 1; IX. 494.
TABLE BAY, XXI. 1; X. 711.

mountain, XXI. 1; X. 714; XIV. 655-its table-cloth, ib. computing, II 8. Table-land, in Switzerland, XX. 888. Table-talk See Ana.
Tables, Twelve, Laws of the, XIX. 301, VI. 739 glacier, X 635.
Tablet, in architecture, III 513 TABOR, town in Bohemia, XXI. 1. (Mount), XXI 1, XVII 183. Taborites, XXI. 972 TABRIZ, Persian town, XXI. 2 Taccaceæ, nat. order of plants, V. 212. Tuccazze, river, II 55. Tachina, genus of insects, IX. 248. Tachinus, genus of insects, IX. 104.
Tachometer, XII. 143; XVI 60.
Tachos, or Teos, king of Egypt, VIII 406
Tachyaphaltite, XV. 87. Tachydromia, genus of insects, IX. 236. Tachydromiæ, family of insects, IX. 236. Tachydromus, genus of reptiles, XIX. 30. Tachylite, mineral, XV. 83.
Tachypetes, genus of birds, XVI. 814.
Tachyphonus, genus of blids, XVI. 751. Tachyporus, genus of insects, IX. 104.
Tacirus (C. Cornelius), XXI 2; XI. 548
—his Life of Agricola, V. 378—his annals, III. 215-on the army of Sesostris, 622, n. 2—on political constitutions, VIII 760, 761—his allusion to London, XIII. 658—his allusion to Christ's death, XII. 760—on the Germans, VI 602, 606; X. 572, 573—on the Goths, 727-contrasted with Suctonius, XX. 788 - Roman emperor, XIX. 349. Tacking, in seamanship, XX. 18.
Tackle, in mechanics, XIV. 401—White's, TACNA, town in Peru, XXI. 5; XVII. 474. Taconic system, in the geology of New York, XVI. 214. Tactics, military, XXI. 702—of battles, 710—naval, XVI. 108; XXI. 719.
Tacubaya, in Mexico, XIV. 722.
TABCASTER, XXI. 5—building-stone of, XX. 712.

Tadjiks, people of Bukhara, V. 758.
TADMOR, XXI. 5; XVII. 221.
Tadorna, genus of birds, XVI. 817.
Tadpoles, XIX. 74, 79—temporary gills of,

Tænia, in architecture, III. 507, 518, genus of zoophytes, XXI. 979, 977,

IÎI. 113.

998-in horses, 569.

TÆ-TAM Tænianotus, genus of fishes, XII 283. Tænndæ, family of fishes, XII 303 Tæniobranchiata, order of mollusks, XV Tæmura, genus of fishes, XIL 328 Taff, river, X. 642 TAFILLELT, or Taflet, in Morocco, XXI 5: XV 595 Tafnet, Egyptian deity, VIII. 437. Taganrog, in Russia, XXI. 5; VIII. 520; XIX. 521. Taganyka, African lake, XV 500 Tagenia, genus of insects, IX 129. TAGIIMON, town in Wexford, XXI 5. Tagilite, mineral, XV. 104. TAGLIACOZZI (Gasparo), or Taliacotius, surgeon, XXI. 5, XX 818. TAGODAST, in Morocco, XXI. 5 Tagus, river, XXL 5, 302, IX. 339; XIII. 804; XVII. 647, XVIII. 393; XX 486, 487—gold of the, XVIII. 394. Tahir Pasha, VIII 490
TAHITI, XXI. 6, XVIII. 280, 281—society
of Arreoys in, III. 676—bread-fruit of,
V 301—tradition of the Deluge m, VII. 719-French protectorate of, X 217. Tahitian group of Islands, XVIII. 280. Tai Mihal, mausoleum at Agra, II 244 Tai-wan, town in the island of Formos XXI 6. TAI-VIIAN, fown in Ching, XX, 6. Taico Sama, Japanese emperor, XII. 697 Tail of animals, bones of the, III 76, 84muscles, 93—uscs, ib
Taille, in France, X. 278; XXI. 47, 38, n Tailors, diseases of, XIV. 442-merchant tailors, XXI 913. Tailzie. See Entail Tain, town in Ross-slure, XXL 6 Taira, in zoology, XIV. 156. Taizalæ, Caledonian tribe, VI. 74 Talapat. Sec Talipat. TALAVERA-DE-LA-REINA, in Spain, XXI 6
—battle of, III. 690, V. 606; XXI 823
Talbot (W. H. Fox), his invention of calotype, I. 923; XVII 545—his polygliptic Talbotstown, in Ireland, XXI, 859. Talbotype, XVII. 545, 546. See Calotype Tale, mineral, XV. 78. Talca, in Chile, VI. 547.
Talcaluano, in Chile, VI. 546; VII. 228.
Talcose schist, XV. 154.
TALENT, XXI. 6, XVI. 356; VII. 66, 67. TALFOURD (Thomas Noon), dramatist, XXI. 6. Taliacotius. See Tagliacozzi. Talians, Indian people, XXI. 151. Talicius, VII. 317 TALIPAT Palm, XXI. 7. Talismans, 11. 735. Tall, various meanings of the word, VIII. Tallahassee, town in Florida, IX. 667. Tallard (Marshal), V. 448. TALLEYRAND-PERIGORD (Charles Maurice do), XXI. 8; X. 507, 125, 141 et seq— death and character, 212—his reply to Lord Grenville, V. 569 TALLIEN (J. Lambert), XXI. 14; X. 90 et sea. TALLIS (Thomas), musician, XXI. 14. Tallon, town in Ireland, XXI. 15.
Tallow, XVI. 493—candles of, VI. 170—mineral, XV. 124—vegetable, VI. 589, XVI. 496-of New South Wales, IV. 285. Tally, calculation by, II. 8. Talma (F. Joseph), tragedian, XXI. 15. Talmup, XXI. 15; XII. 776. See Mishna. Talmudists, IX. 395—in Russia, XIX. 523. Talpa, genus of mammalia, XIV. 152; XXI. 546, 547. See Mole. Talt, loch, XX. 829. Tamandua, genus of mammalia, XIV. Tamaricaccee, nat. order of plants, V. 183.

Tamarind tree, V. 190

Tamariak, not injured by sea sir, VII. 406.

Tamaron, town in Spain, XXI. 22.

#### TAM—TAR

Tamatave, in Madagascar, XIII, 793. Tamatia, genus of biids, XVI 779. Tamaulipas (Santa Anna de), XXI. 17. TAMAULIPS, or Tamaulipas, Mexican state, XXI. 16; XIV 727, 718 Tambookies, Kafranan tribe, XIII 32, 37 Tambour lace, XIII 142. Tambouring machine, VII. 449.
Tambov, in Russia, XXI. 16; XIX 521.
Tamerlane, or Timoor-lang, XXI 17. See Timur Tamise, town in Belgium, XXI 179. Tamnophilus, genus of insects, IX 140.
Tampico, seaport in Mexico, XXI. 17; XIV. 728. Tamping, in blasting rocks, IV 756 TAMWORTH, English town, XXL 17. Tan See Tanning Tana, or Tarna, river in Lapland, XIII. Tanagers, birds, XVI 751. Tanagra, ancient town in Bœotia, XXI. 17 genus of birds, XVI. 751.
Tanais, river, XIX. 869. See Don, in Russia. Tancredia, fossil mollusks, XVII 107. Tanda, in Oude, XVII 17. TANDERAGEE, in Ireland, XXI 17. Tanganyika, African lake, XXI 17. Tangent, X. 514; XXI 338-nature and calculation of tangents, XIII. 566—tangent-plane, XX 153, and n. 3

Tangerminde, town in Saxony, XXI. 17. Tanghin, poison, V 199. TANGIER, in Morocco, XXI 17; XV. 596 -pilgrims from, ib.—mole at, V. 301—bombardment of, by the French, X 221. Tangrolipix, VII 314. Tangun hoise, V 34.
Tanis, town of ancient Egypt, XXI 18, VIII. 498 Tanistry, law of, XIX. 750. Tanjore, in India, XXI. 18 Tanks for liquid manue, II. 268-iron tanks in ships, XX. 24
TANNARILL (Robert), XXI. 18 Tannia acid in wines, AXI. 889.
Tannin, VIII 281; XIII 305—in tea, XXI. TANNING, XXI. 19-materials for, XIII. 305—recent improvements in, 311—Sir II. Davy on, VII. 668 Tanrec, in zoology, XIV 158—dentition of, XVI. 452—its hybernation, III. 181; XII. 62. Tansy, plant, XI, 745 Tantalite, mineral, XV. 110. Tantalium, XV. 66. Tantalion Castle, XI, 178. Tantalus, in fable, XXI. 19.

genus of birds, XVI. 800. Tanypeza, genus of insects, IX 253. Tanypus, genus of insects, IX. 225. Tanysiptera, genus of birds, XVI. 773. Tanystrophaus, fossil reptiles, XVII. 146.
Tao-tse, VI. 569.
Taormina, in Sielly, XX. 244.
Tap-root, V. 78—in trees, XVII. 769; in the oak, XXI. 273
Tapes, fossil mollusks, XVII 108. TAPESTRY, XXI. 19. Tapetum, in various animals, YII. 96.
Tapeworm, XXI 978—its mode of reproduction, XVII. 688. Taphazous, genus of mammalia, XIV. 149. Taphrenchyma, tissue in plants, V. 70. Tapioca, V. 294. Tapir, in zoology, XIV. 199; II. 713—dentition of, XVI. 471.
Tapping, XXI. 567. TAPROBANE, ancient name of Ceylon, XXI. 21, X. 463. See Ceylon. TAR, XXI. 21; XVI. 100—coal-tar, X. 433 covery of New Holland, IV. 252, 253; and New Zealand, 266—on the aborigines of Australia, 258—Papua visited —used for stamping cotton, IV. 764—tar apparatus in gas-manufacture, X. 415—from peat, XVII. 359—tarring of by, 262-Van Diemen's Land discovered

ropes, XIX. 404.

Tara, hill of, in Meath, XIV. 377.

#### TAR-TAS

Tarannon shales, XV. 198. Taranta (Valesco de), XX. 817. Taranto, gulf of, XX 242 - town of Naples, XXI 22 Tarapaca, in Peru, nitrate of soda in, XVII. TARARE, French town, XXI. 22. - an excessive eater, VIII 23 TARASCON, town of France, XXI 22 Tarazona, town of Spain, XXI 22 TARBAGATAI, town in China, XXI 22 Tarbes, town in France, XXI 23 TARBOLTON, in Ayrshire, XXI. 23 Tardigiada, tribe of mammalia, XIV 190. Tare, in commerce, III 595.
Tarentine war, XIX. 305, XXI. 22.
Tarentula, III. 383
Tarentum, XXI. 22—coins of, XVI -coins of, XVI 363. Tares, culture of, II. 312. TARGUM, XXI. 23, XIX. 838. Taniel, poem of, X. 569. Tarifa, scaport in Spain, XXI 24
Tariff, XXI. 24—Sii Robert Peel's reform
of, XVII 364; VII 384 TARKI, or Tarku, town in Asiatic Russia, XXI 24. Tariet (Emile), his work on the Chinese Silk-worm, IX 24 TARN-ET-GARONNE, in Flance, XXI. 25. TARNOPOL, town in Austria, XXI. 25 Tarnowitzite, mineral, XV 93. Tarpeian hill, in Rome, XIX 358 TARPORLEY, English town, XXI 25. TARQUINII, ancient Etrurian city, XXI. 25. Tarquinius Priscus, XIX. 297. - Superbus, XIX. 297. TARQUINS, XXI. 25. Tamaconensis, ancient Spanish province. XX 458. TARRAGONA, Spanish seaport, XXI. 25—siege of, in 1813, V 613.

TARRAGA, town in Spain, XXI. 26.

TARSHISH, XXI. 26; X 460, n, VII. 185.

Tarsipes, dentition of, XVI. 448.

Taisius, genus of mammalia, XIV. 145. Tarsus, in anatomy, bones of the, III 36 —muscles of the, 39—in the mammalia, 82—in birds, 86—in reptiles, 88. — town in Asia Miner, XXI 28. TARTAGLIA, or Tartalea (Nicholas), XXI. 28—his improvements in algebra, I. 557; II 484—on gunnery, N. 103, 104 -on fortification, IN 817, 819. Tartar, employed in dycing, VIII 298,
Tartaric acid, VI 515; IX 768—used for
discharging colours, VIII, 316,
— languages, IX 389; XIII, 199, 216,
Tartars, XXI, 28; II, 766; III, 747, 751; VII. 504; IX. 944, 388; XIX. 522, 550
—skulls of, III. 29—conquests of, in
Asia, 745—European embassies to, in the middle ages, 753 — cultivation of astronomy by, 795—Baghdad taken by, IV. 364—the Clinese derived from, VI. 558-their mode of warfare, 589-their invasions of Poland, XVIII. 140, 142conquest of Russia by, XIX 472—Moscow burnt by, 474—defeated by the Swedes, XX 851. See Timur. TARTARY, XXI. 28-cattle of, 111. 740. See Tartars Tartessus, XXI. 27. TARTINI (Gluseppe), violinist, XXI. 28— on harmony, XV. 701. Tarudant, town in Morocco, XXI. 158. Tash-kurgan, XIII. 77. TASHKAND, in Turkestan, XXI. 29. Task-work, XIV. 280. Tasman (Abel Janssen), XXI 29-his dis-

by, X. 474; XXI. 30—exploratory voyage of, X 474.

TASMANIA, XXI. 29—discovery of, by Tasman, IV. 262; X. 474—general view of, IV. 261—discoveries in, 253—Sir

John Franklin governor of, X. 206-

## TAS-TAY

height of mountains in, XVII. 646wool of, XXI, 912.

Tassie (James), modeller, XXL 33. (William), XXI. 33.

Tassin (Leonard), anatomist, II 763. Tasso (Torquato), XXI 34—his table-talk, II. 740, 741-translations of his Jerusalem Delivered, by Fairfax, IX 469 by Hoole, XI. 622-his poetry, XVIII 95, 111,

Tassoni (Alessandro), XXI. 35-poetry of XVIII. 112.

Taste, sense of, II 178; XVII 677; XIV. 564—in the bee, IV. 575—in insects, IX 44—fishes, XII 220—organ of, III 47, 99. See Tongue

— or perception and judgment of beauty, IV. 534—standard of, 554— effect of education on, 545—the real in the philosophy of taste, XIV. 623-as

an incentive to virtue, XV. 564—national tastes, IV 544
Tata, Hungarian town, VIII 113.
TATE (Nalium), poet, XXI 35, 171—on Shakspeare, XX. 71—his co-authorship with Brady in a metrical version of the Psalms, V. 265

- (Thomas), on the law of density of steam, XX. 572.

TATIANUS, Or Tatian, XXI 35; IX 492, X. 688; XXI, 197 TATIUS (Achilles), Greek winter, XXI, 35 Tatooing, IX 487, XX 231. TATTA, IN Sindh, XXI 35, XX, 305. See

Thattha.

Tattan (Archdeacon), Syriac MSS. discovered by, XII. 360, XIII. 393. Tauler (John), German mystic, XV. 756 Taunton, in Massachusetts, XXI. 36 - in Somersetshire, XXI. 35; XX.

411-vale of, 410. Taupenot (M), his photographic process,

XVII. 549. Tauri, VIL 504 Tauric Chersonese, coins of, XVI. 368.

Taurichthys, genus of fishes, XIL 301, 302 Taurida, XXL 36; VII. 504; XIX. 521. Taurinum, taken by Hannibal, VI. 294. Tauris, bazaar of, IV. 525.

Tauriscus of Tralles, III 303
TAUROMENIUM, in Sicily, XXI. 36.
TAURUS, in Asia Minor, XXI 36; III 758 - and Anti-Taurus, XXI. 377. Tautog, fish, XII. 265.

Tautoga, genus of fishes, XII 267 Tautolite, mineral, XV. 89 Tavai Ponammoo, island, IV. 267, XVI. 232.

Tave, Welsh river, VI. 52. TAVERNER (Jean Baptist), French traveller, XXI. 36-on the use of tea in Japan, 89.

Tavira, in Portugal, XXI 36. Tavistook, in Devonshire, XXI. 36.
Tavoltere, XX. 248.
Tavox, in India, XXI. 37
Tavy, river, VII. 763. Tawee-Tawee, island, XX. 447. Tawing, XXI. 37; XIII. 310.

Taxaceæ, nat. order of plants, V. 209. Taxation, XXI. 37, XVIII. 234—direct, XXI. 37, 43-indirect, 37, 57-increase of, the cause of rise of prices in war, VII 199 -comparative burden of taxes borne by agriculturists, 393-practice of taxation said to have been introduced by the Crusades, 532-connection between the state of agriculture and extent of, VIII. 725-hitherto favourable to the progress of the country, XIV. 276—for support of the poor, XVIII. 301—tax on game, XX. 210-on woollen and worsted goods,

XXI. 914, 917—influence of, on wages, 680-in France, X. 273; India, XI. 476, 510 et seq.; Scotland, XIX. 809; Prussia, XVIII. 674, the United States, XXI.

427. See Income Tax, Property Tax, Funding System. Taxers, in Bologna University, XXL 447.

Taxicornes, family of insects, IX. 181. Taxological botany, V 174. Tay (Loch), XVII. 455; XIX. 794. RIVER, XXL 76; XVII. 455, 647;

## TAY-TEA

XIX. 791, 794-salmon fisheries of, IX 603, 604-improvement in its navigation, XVI. 74-amount of river and tidal water in, 83-increase of tidal water by works on, 1b -- inundations of, XVII. 451 and n.

Taygetus, mountain, XI. 11; XIII. 147. Taylerson and Co., their diagonal framing

in ship-building, XX. 204
Taxlor (Brook), XXI 76; I 714—a new branch added by him to the analysis of variable quantity, 648—more remarkable for the ingeniuty and depth, than for the perspicuity of his writings, ib. theorem known by his name, ib only Butish mathematician after Newton who could enter the lists with the Bernoullis, 714-on capillary attraction, 731-on the force of adhesion, II 140problem in the integral calculus pro posed by, IX 675—his theorem, 689; applied to the development of functions, 691-on magnetism, XIV. 4.

(Dr), of Norwich, on the spirit and temper with which theology should be studied. XXI. 184-on original sin, 204. - (Ephraim), his power-loom, XXI

(Isaac), his definition of imagina-tion, XII. 364.

(James), his connection with steamnavigation, I. 869, XX 637. —— (JEREMY), XXI 77.

(Joun), the water poet, XXI. 78. (Joun), philologer, XXI 78.

(Dr John), his translation of Hindu treatise on algebra, II. 487.

(Mr), on coal strata, VII 117

(Mr), his oil-gas apparatus, X. 427 (Mr), on the transmission of ancient books, XIII. 388, n 1.

(Rev. Robert), on the natives of New Zealand, XVI. 237, 238.

(Sir Robert), his merits as an architect, III 455.

- (THOMAS), the Platonist, XXI. 79. (Walter), of Southampton, his

block-machinery, IV. 783. (WILLIAM), XXI. 79. Institute, at Oxford, XVII. 35
Taylor's Tables of Logarithms, XIII 555

- catalogue of stars, IV. 95. TCHAD, or Tsad (Lake), XXI. 80, II. 214 V. 50-navigated by Dr Overweg, II

211, 214-Dr Barth's account of, X 478 Tchadda, or Tschadda, African river, X.

478; II. 214; XVI 266. Tchaiphut Kaleh, VII. 505. Tchar, mountains in Turkey, XXI. 376. TCHAUSSY, town in Russia, XXI. 80. TCHEBOKSARI, town in Russia, XXI. 80.

Tcheffkin, on the mining produce of Russia, XIX 543. Tcheffkinite, mineral, XV 90.

Tchelminar, ruins of, III 401 Tchemakha, XIX 551.

TCHERKASK, two Russian towns, XXL 80 Tchernaya, battle of, XIX. 509. Tohernigov, in Russia, XXI 80; XIX

Tchihatcheff's work on Asia Minor, III.

TCHORUM, town in Turkey, XXL 80. Tchoufut Kaleh, VII 505. TCHUGUJEV, town in Russia, XXL 80.

TEA and TEA-TRADE, XXI 81; IX. 761of Assam, III. 763-Brazil, V. 294-Burmah, 778—China, VI. 589—Japan, XII. 693—Western Himalaya, XI 444 -Kemaon, XIII. 59-Nganhoci, XVI. 241—Punjab, XVIII. 690—Cochin-China, VII 48—green and black, V. 185—exports from Canton, VI. 200 consumption of, 591 — exports from China, 594; duty on, in China, XXI. 60 - history of the duties on, 70culture of, in United States, 425-adulterations of, IX. 769.

order of plants, V. 185. of Paraguay, IV. 827, XVII. 268. See Maté.

Teachers, diseases of, XIV 442-relative duties of teacher and taught, XV. 569.

#### TEA-TEL

Teak-wood, XVI. 101; XXI 276-in shipbuilding, XX. 167-tree, V 202 - in Burmah, 779—Bombay, 2—Malabar, XIV. 104—India, XI 454—Moulmein, XV 667—African, V. 206.

Teals, birds, XVI. 819; IX 762. TEANO, town of Naples, XXI 92. Tears, gland secreting, III 45. Teazel, order of plants, V 196. grown in Gloucestershire, X 680.

Teazling of woollen cloth, XXI 922. Technical education, XV. 807. Technology, chair of, in Edinburgh, XXI

Tectibianchiata, order of mollusks, XV. 371—fossil, XVII. 111

Tectazite, mineral, XV 97. Tedla, in Morocco, XXI 93. Tees, river, VIII. 266-navigation of the,

XX 707.

Teeswater cattle, II. 340-shcep, 346. Teeth, II 830, XVII 658-works on, II 767-relation between food and, 774structure and development of, 830 III. 25 — comparative anatomy of, 105 — of fishes, 106, XII. 222, fossil, 118, 119-of the mammalia, XIV 135, 146, n., XVII. 151, 158, 159 et seq-Aristotle on, XIV 123—of serpents, XIX. 44—in the domestic animals, XXI 563; their diseases, 564-homologies of the teeth, XVI 478—dyed black by the Japanese, XII 690 See Odontology.

of wheels, XIV 393 et seq.—friction of, 407-in clocks and watches, VII 36 See Wheels, Mechanics

TEFLIS, town in Georgia, XXI 92; X. 566; XIX, 551—trade of, III, 755—incteorological observations at, XIV. 687government, XXI 521.

TEFZA, town in Morocco, XXI. 93 TEGEA, ancient Grecian city, XXI. 93. Tegerhy, in Fezzan, IX. 530. Tegmen, in botany, V. 139.

TEGNER (Elias), Swedish poet, XXI 93, XIX. 695, 700.

TEGUCIGALPA, town in Honduras, XXI 93; XI 618, 614.

Tehama, III. 341, 348
TEHERAN, or Tehran, Persian city, XXI.
93—climate of, XVII 422

TERUANTEPEC, town in Mexico, XXI. 93; XIV. 725

isthmus of, II 711
Teifi, river, VI 233—vale of, ib See

TEIGNMOUTH, in Devenshue, XXI. 93railway to, VII 763
Teinds, in Scotland, court of, XVIII. 494.

Teinoscope, XVI. 586. Tervy, river, VI 52.

Telecles, Greek sculptor, XIX. 853. Teledu, in zoology, XIV 158. TELEGRAPH (Electric), XXI. 94; VIII. 543

-its early history, I. 985-invention of, II. 725—three independent inventors, I. 986—Gauss and Weber's early experiments, 985-telegraphs of Morse, Steinhell, and Whoatstone, ib, 986 (see these articles)—Bain's, VIII. 544; I. 986—Mr Fothergill Cooke's services to, ib, n—its services to astronomy, IV. 110—to find the longitude by, XIII 600-submanne telegraph, I.986; between Dover and the French coast, ib.; in the Red Sea, XVIII. 819 (see Atlantic Telegraph)-telegraph offices on railways, 767-utility of, in preventing railway accidents, 795—in Belgium, IV. 626— England, VIII. 722—London, XIII. 679 —Russia, XIX. 536—Spain, XX. 491— Switzerland, 890-United States, XXI. 427.

Teleosaurus, fossil reptiles, XVII. 152-teeth of, XVI. 437.

Telephorus, genus of insects, IX. 110. TELESCOPE, XXI 117—invention of, I. 626; II. 86; XIII. 449; XVI. 524, 527—im-provers of, II. 87; Sir William Herschel, L 839; Dolland, Rosse, Lassell, ib. (see these articles) — construction of, by Galileo, 608; IL 87; III. 800; X. 376; XVI. 528-advantages to science arising

#### TEL-TEM

from, I 19, n. 2, particularly astronomy, 613-law on which its construction depends discovered by Snellius, 747, but simplified, and first published by Descartes, 1b -magnifying power of, 839; XVI 569-illuminating power, I 839space-penetrating-power, 840-rationale of, XVI 569—refracting telescopes, II 39, XVI 580—refracting, 532, 568— achromatic, II 86, XVI. 584, 581 astronomical, IV 149, XVI 569-applied to quadrants, III 802, to sextants, XVI 29—Dorpat, IV 150—Gregorian reflecting, XVI 533-Newtonian, ib-Cassegrainian, 1b -Lord Rosse's, IV. 151; I. 863-Herschel's forty-feet reflector, 840—Blair's aplanatic, XVI 536
—Lassell's, I 860 See Optics

Telfan (Mr), huge medusa seen by, XXI. 997

Telford (Thomas), engineer, XXI 145—his suspension bridges, I 875—Menai bridge by, ib -aqueducts designed by, III. 339—iron bridge in London proposed by, XII 579—other iron bridges by, 578, 583, 584—his method of 10admaking, XIX. 226-his birthplace, XI. 183.

Tell (William), XXI 146; XX. 884. el Amaiinch, in Egypt, VIII. 504. el-Kady, in Palestine, XVII 184, 185

TELLEZ (Gabriel), dramatist, XXI. 147 TELLIOHERRY, in India, XXI 147. Tellina, genus of mollusks, XV 347, 350 Telluidæ, family of mollusks, XV. 350.

Telluric iron, XV. 114. Tellurism, XX. 445. Tellurite, mineral, XV 112.

Tellurium, VI. 495; XV. 65, 114—its discovery, XIII 106—black, or foliated, XV. 118.

Temera, genus of fishes, XII. 327. Temesvar, XXI. 147.

Temia, genus of birds, XVI. 765. Temmink (M.), his arrangement of the mammalia, XIV. 130, 131—on birds, XVI 731—his ornithological system, 821.

Temnodon, genus of fishes, XII 296, 298 Temnoplemus, fossil echinoidea, XVII 100.

TEMPE, vale of, XXI. 147; XI 12.

Temper, in horses, XI. 642, 650, 688.
Tempera painting, XVII. 64.
Temperament, XVII. 567—its influence on insanity, XIV. 536; and on health, XIX.

- OF THE MUSICAL SCALE, XXI. 148. Temperance, conducive to health, XIV. 441.

Temperate zones, X 484.

Temperature, Gay-Lussac's observations on its diminution with increase of height, II. 182, 184—of the climate of Africa, 215—of the climate of Arabia, III. 341—influence of the solar spots on, IV. 88-its effect on cohesive force, VI. 208; and on the brilliancy of gas-light, X. 424-variations of, in the climate of England, VIII. 718—mean of several places in Europe, IX. 381—artificial means of increasing and diminishing, XI. 275 — its influence on the distil-bution of organised beings, XII. 329; on the distribution of plants, V. -isothermal lines, VI. 771-law of its decrement on ascending into the air, XIV. 641—death from extremes of, 481—effect of, on magnets, 6—diurnal and annual fluctuations of, 670—of mines, XV. 225-one of the chief elements in our notion of climates, XVII. 610—distribution of, 611—normal law of mean temperature, ib.—average surface temperature of the earth, 618extremes of absolute temperature over the globe, ib.-line of maximum mean, ib.—of man and animals, 665—plague supposed to be dependent on, 751—of the Polar Regions, XVIII. 178—temperature of steam, XX. 555, 571—relation of the pressure and temperature of

#### TEM—TEN

steam, 564-absolute, in thermo-dynamics, 618 See Chmate, Heat, Warmmg. &c.

Tempest in France in 1788, X. 48.

TEMPESTA, XXI 148 See Molyn TEMPLARS, Knights of the Temple, XXI 148, VI 622, XIII 115; X. 15, XV. 310, 408

TEMPLE (Sir William), XXI. 148, XX. 870—on ancient and modern learning, IV 657-on the mercantile prosperity of Holland, VII 197—Dean Swift aman-uensis to, XX 837, 870—his posthu-mous works edited by Swift, 871

(Sir Grenville), his description of a Maltese galley, XX 123

 of Jerusalem, XII 740, 742 — its destruction necessarily abolished the Mosaic system, I 468—behef of the Jews that it will yet become the centre of worship for all mankind, 485—Julian's attempt to rebuild it, II. 644; XII 766, XVII 195

- XXI 151—Greek temples, III 461 -Roman, 469-Egyptian, 458-Mexican, XIV 721-of Ava. IV. 321.

or Inns of Court, in London, XIII. 672

- libraries of the Inner and Middle. XIII 394

Templecross, XXI. 840 TEMPLEMORE, town in Ireland, XXI 151 Templeton (James), his improvement in carpet-making, VI. 272. Temporal bones, III. 20, 78.

Témsah, lake, proposed harbour at, XX.

Tenacity of minerals, XV 56-of metals. woods, &c., XX, 756, 757 Tenaille, in fortification, IX 810, 818.

Tenant-right, II 365—tenant-at-will, ib See Lease, Tennie. Tenasserim, XXI 151

TENBURY, in Worcestershire, XXI. 152. TENRY, town in Wales, AXI 152. Tench, XII. 256—angling for, III. 160 Tencin (Madame de), character of her novels, XIX. 287.

Tendons, structure of, II. 823. Tendrils. V 79

Tenebilo, genus of insects, IX. 130 Tenebrionites, family of insects, IX. 130. TENEDOS, island, XXI 152.

Teneriffe. VI. 165-Blake's attack on the Spanish fleet at. IV. 752-Peak of, VI 175; zones of vegetation on, XVII. 625; clouds as seen from, XIV 657 - old crater walls of volcano in, XXI. 604wines of, 887.

Tengri, or Thian Shan, mountains, XVII.

TENIERS (David), two painters of that name, XXI. 152; XVII. 75.

TENISON (Thomas), archbishop, XXI. 152. Tennant (Charles), his bleaching sub-stances, IV. 760, 761, 762—on the loss of weight sustained by linen in bleaching. 769.

(Emerson), his act regarding the copyright of designs for manufactures. VII. 862.

(Mr), on Hindu penances, XI. 469. (SMITHSON), chemist, XXI. 152. (WILLIAM), poet and orientalist

XXI. 154. Tennant's grubber, II. 272-system of

winter fallowing, 290. Tennantite, mineral, XV. 120.

TENNEMAN (W. Gottlieb), XXI. 165—his History of Philosophy, V. 698. TENNESSEE, American state, XXI. 155, 419—debt of, 428—wines, 888.

Tenny, in heraldry, XI. 324. Tenochtitlan, ruins at, II. 684. Tenon and mortise, XII. 810.

Tenoning, in carpentry, V. 747 Tenorite, mineral, XV. 112. Tenrecs. See Tanrec. TENSE, in grammar, XXI, 156; X, 768, 790.

Tensift, river, XV. 594. Tension, failure of timber by, XX. 755, TEN—TER

Tent, Arabian, III. 353-Lapland, XIII

Tentacles, in mollusks, XV. 323, 355, 358. Tentaculites, fossils, XVII 101. TENTERDEN, town in Kent, XXI. 156.

- (CHARLES ABBOTT), lord, XXI. 157. Tenthredinetæ, family of insects, IX. 183. Tenthredo, genus of insects, IX. 183. Tentonum, in anatomy, III. 56, 105 TENTIRA, XXI 157 See Dendorah. Tentyria, genus of insects, IX. 129

Tenuirostres, tribe of birds, XVI. 768. TENURE, in law, XXI 157—right to sit in the House of Lords by, XVII 292—of land, II 364; in India, XI 512, 518; Egypt, VIII. 428

Teocallis, Mexican place of worship, II. 684; XIV. 722 - Robertson's mistake regaiding, II 684, n. Tephroite, mineral, XV. 89.

Tequendama, waterfall of, II. 668; III 131. IV. 808

Tel-Goes, town in Holland, X 693. Terai, or Terrae, wooded region of the Himalayas, XI. 437, 438.

Teramo, town of Naples, XXI 157 Teratolite, mineral, XV 84. Teratology, V 120; XVII 702. Terbium, VI. 488.

TERCETRA, island, XXI 157, IV 336. Terchloride of phosphorus, VI. 480 Terebella, genus of annelides, XI. 295 Terebellum, genus of mollusks, XV. 388 Terebinth tree, V. 190.

Terebinthacem, nat order of plants, V 189. Terebrantia, insects, IX 183. Telebratella, genus of mollusks, XV. 338

-fossil XVII 103 Terebratula, genus of mollusks, XV. 337 Terebratulide, family of mollusks, XV 336

Terebratulina, genus of mollusks, XV 337-fossil, XVII. 103. Teredina, genus of mollusks, XV 352-fossil, XVII 108

Teredo navalis, XV 353, 354; XI 224; VIII 77-in the Black Sea, IV. 741.

Terek, river, XIX, 515 Terentia, wife of Cicero, VI. 719

TERENTIUS APER (Publius), comic poet, XXI. 157—comedies of, VIII 141— poetry of, XVIII. 104—Bentley's edition of, IV 659

Varro, VL 295. Teres, worm in the horse, XXI. 569. Tergouw. See Gouda. Termes, genus of insects, IX. 65, 179; II.

Terms, academical, at Oxford, XXI. 458;

Cambridge, 463, Dublin, 487; Queen's Universities, 490
—— clerical, VIII. 744.

doctrine of, in logic, XIII. 578the quantity of, 579, 583-signs of the distribution of common terms, ib .- development of the extension of, 581-of the comprehension of, ib.-law of, 582. See Logic.

Terminal, in architecture, III. 513. TERMINI, town in Sicily, XXI, 158. of railways, XVIII. 766 Stations.

Termitine, family of insects, IX. 179. Termoli, Neapolitan town, XX. 243 TERNATE, island, XXI. 158. Terni, XXI. 158; XII 424. Terns, birds, XVI. 818.

Ternstromiacese, nat. order of plants, V. 185-region of, 227; XVII. 627. TERODANT, town in Morocco, XXI. 158. TERPANDER, Greek poet, XXI. 158.

Terpsichore, XV. 699.
Terra cotta, XX. 785—statues in, XIX. 814 -remains of vessels composed of, XL21. - DEL FUEGO, XXI 158. See Tierra del Fuego.

- DI LAVORO, in Italy, XXI. 158; XII. 636.

japonica, VI. 382—used in prepar-ing betel, IV. 685, 686—in adulterating tea, XXI. 87—used in tanning, XIII. 306.

TERRACINA, in the Papal States, XXI. 158; XVIL 241.

## TER-TET

TERRANOVA, in Sicily, XXI 159; XX. 245 TERRASSON (Jean), XXI. 159 TERRE HAUTE, town in Indiana, XXI 159. Terrestrial serpents, XIX. 55.

Terrible, steam-ship, account of two voyages made by, XX. 22—ngging of, 23. Terrier, XI 773.

Territonal government, in the United States, XXI. 432.

Territory, colonies for the sake of, VII. Tellor, Reign of, in France, X. 88

Tertiary epoch, in geology, XV 195, 211—flora of, V. 237; XVII 641—fishes, XII 349, 351, 354, 355, XVII 640 ichthyodorulites, 117-shells, XV 403corals, XVII 97—rocks, 587, 588, of New York, XVI. 215; Russia, XIX. 518; Spain, XX. 482.

TERTULLIANUS (Q S F), XXI. 159-his execration of the anatomical researches of Herophilus, II 751-on the theatre, VIII 142-on theology, XXI. 191 et seq.

Teruel, in Spain, XXI 159. TERZETTO, in music, XXI 159 TESCHEN, in Molavia, XXI 159 Tessarops, genus of arachnides, III 383. Tesseral system of crystallisation, XV. 41 -combinations of, 43-twin crystals, 51. Tesseratoma, genus of insects, IX 162.

Test Act, passing of the, V 426-attempts in 1787, 1790, 1791, to get it repealed, 522, 562, 588—repeal of, 652.

objects for microscopes, XIV 802. tube, in bleaching, IV. 763 Testa, in botany, V. 139. Testacea, family of mollusks, XV 401-

hermaphrodites among the, III. 171. Testacella, genus of mollusks, XV. 374.
TESTAMENT, XXI. 159 See Wills.

New, Dispensation See Gospel
New, Scriptures, IV 697—forma-

tion of the canon, ib -canonical books of, 698-state of the text, 698, XIX 835-various readings, IV 698-for the blind, 782-translation of the word Testament in Scripture, I 480, n 2—always to be understood as a covenant, 481

- Old, Dispensation See Mosaic Dispensation.

- Old, Scriptures, IV 694-history of the text, 695, XIX. 894—formation of the canon, IV. 696; completion of, ib. - canonical books of, 697 - earliest known sculptors mentioned in, XIX. 846. See Bible.

Testo (M.), corruption of, X. 228 Testi (Fulvio), poetry of, XVIII. 112. Testicles, III 69.

Testimony, credit due to, IX. 416-value of, XVIII. 590 — application of the theory of prohability to, ib., 609—argument from, XIX. 124. Testu's aërial voyage, IL 178.

TESTUDO, military device, XXI. 159. genus of reptiles, XIX. 17-num-ber of species, XVII. 634-fossil, 153.

See Tortoise. Tetanocera, genus of insects, IX 255. Tetanops, genus of insects, IX. 252.

Tetanura, genus of insects, IX. 253. Tetanus, a disease, XVII. 700-in unimais,

TETBURY, English town, XXI. 160. Tete, African town, XV. 670; XX 405. Tetens (J. Nicholas), on the calculations of life assurance, XII. 403.

Têtes-de-pont, IX. 800. Tetrabranchiata, order of mollusks, XV. 390—fossil, XVII. 111. Tetradymite, mineral, XV. 118.
Tetragnatha, genus of arachnides, III

Tetragonal system of crystallisation, XV.

44 twin crystals in, 52. Tetragoniacem, nat. order of plants, V. 194. Tetragonolopis, genus of fossil fishes, XII. 324; XVII. 126.

Tetragonopterus, genus of fishes, XII. 246. Tetragonurus, genus of fishes, XII. 292. Tetramera, section of insects, IX. 136. Tetrao, gonus of birds, XVL 791.

#### TET—THA

Tetraodon, genus of fishes, XII 312, 313, 314-poisonous species, XIV 439, XII.

- electricus, VIII 577 Tetraodontini, sub-family of fishes, XII.

Tetraphyline, mineral, XV 101. Tetrapneumones, arachnides, III 377 Tetraprostyle, in architecture, III 513 Tetrapterus, genus of fossil fishes, XIL

Tetrapturus, genus of fishes, XII. 297. Tetrarcha, Egyptian deity, XI. 386 Tetrarhynchus, genus of entozoa, XXI.

Tetrascope, XIII. 39. Tetraspore, in botany, V 147. Tetrastoma, zoophytes, XXI. 980. Tetrastoon, in architecture, III 513. Tetrastyle, in architectuie, III. 513. Tetrix, genus of insects, IX 160. Tettigometra, genus of insects, IX, 169. Tettigonia, genus of insects, IX 170. TETUAN, in Morocco, XXI 160. TETZEL, XXI 160-sale of indulgences by, XII. 378, XIII 724
Tenlène's lighthouse reflectors, XIII 468

Teuta, queen of the Illynans, XII. 364,

Teuthidre, family of mollusks, XV. 399. Teuthydidre, or Teuthyoids, family of fishes, MII 304.

Touthys, family of fossil fishes, XII 341 Toutones, XXI 160—their war with the Romans, XIX. 319; VI. 724.

Teutonic knights, XIII. 115; XV. 408ın Prussia, XVIII. 648, 676.

languages, XVII. 528. Teviot, river, XIX 451, 452 TEWKESBURY, in Gloucestershire, XXI. 160; X. 682-iron bridge at, XII, 584, 585

Thxas, XXI. 160, 419-wines of, 888tribes of people belonging to, IX. 347language of, AIII 222-proposed separation of, from Coaliulla, XIV. 713-asserts its independence, ib-annexation of, by the United States, XXL 441. TEXEL, island, XXI. 162.

Textile fibres, XXI. 781, 782—quantities imported, ib.—processes, 783.——industry, statistics of, XXI. 791—

legal regulation of, in factories, 790-growth of the various branches, 792people employed in, ib.—exports, 79'i—of France, ib See Cotton, Flax, Hair, Hemp, Silk, Weaving, Wool and Woollen Manufacture, &c.

Textures, in physiology, morbid growths and degenerations of, XVII. theory of their degeneration, 696. Teyus, genus of reptiles, XIX 28.

Theza, or Taza, town in Morocco, XXI, 162. Tezcuco, or Tezcoco, Mexican town and lake, XXI. 162; XIV. 722, 723.

Tezozomoc, Mexican king, XIV. 700.
Thackeray (W. M.), XIX. 283—on Hogarth,
XI. 554—on Steele, XX. 673. Theor (Albert), his improvements in agri-culture, XVIII. 666.

Thais, genus of insects, 1X. 207. Thalamifiora, sub-class of plants, V. 180 Thalamus, in botany, V. 118. Thalassicollem, zoophytes, XXI. 1007. Thalassorhinus, genus of fishes, XII. 324.

Thalberg (Mr), on plano-fortes, XVII. 704. Thaler, German coin, X. 591. TRALES, XXI. 162-his philosophy, III.

538—astronomy, 787—mathematical knowledge, X. 497—acquainted with the electrical properties of amber, VIII. 523. THALIA, XXL 162; XV. 699-planet, IV. 91.

Thallite, mineral, XV 85. Thallogenee, sub-class of plants, V. 217. Thallogens, plants, V. 80, 142. Thallus of lichens, V. 146.

THAME, town in Oxfordshire, XXI 162.
THAMES, river, XXI 162; VIII 716;
XIII. 661; XIV. 807; XVII 647 source of, X 680—salling of the Dutch fleet up the, V. 428—navigation of, AIII. 661—bridges over, XIV. 808—

## THA-THE

mineral matters in its waters, XV 143 -sanitary condition of, XIX, 606 Thames Tunnel, XIII. 676; I. 879-shield, ib -completion of, 880; V 696. Thamnophilus, genus of birds, XVI 748 THANE, XXI, 163. THANET (Isle of), XXI 163; XIII. 66, 67 -Thanet Sands, XV. 212 THANN, town in France, XXI. 163. THAPSACUS, XXI. 163. Thapsus, battle of, XIX. 326 Tharyambas L and II, kings of Epirus, IX. 217. THASOS, Island, XXI 163. Thatching of stacks, II. 314 Thattha, or Tatta, town in Oudh, XX. 305. Thaumatrope, optical instrument, XVI. Thavies' Inn, XII. 385 THAXTED, town in Essex, XXI. 163. The, article, X. 750 Theætetus, geometer, X. 499. THEATINES, religious order, XXI. 163 THEATRE, XXI 164-ancient Greek theatres, III 442, 463; VIII 135; IV 164-Roman, III. 470; XIX 359-acclamations and applauders in ancient theatres, IL 77; III 325—0. P riots, XIII. 61—attendance of Scotch clergy-men at, XIX. 230—monopoly of the two great London theatres, VIII. 168theatres in London, XIII. 675-Paris, XVII. 284—Globe Theatre, XX 75, 85-theatres of Pompeu, XVIII. 287 Se Drama, Actor, Dublin, and other capital cities. Thebaic version of the Scriptures, IV 700; THEBES, in ancient Greece, XXI. 176army of, III. 628—taken and destroyed by Alexander, XIII. 766—war with Sparta, XX. 501, 502. in Egypt, XXI 179—runs of, III. 435, 486, 487; VIII. 506. Thebith Ben Korah, III 794. Theca, in botany, V. 142. Thecadactyli, reptiles, XIX. 36 Thecididæ, family of mollusks, XV. 338. Thecidium, genus of mollusks, XV. 338fossil, XVIL 105. Thecodontia, fossil reptiles, XVII. 140 Thecodontosaurus, fossil reptile, XVII. 140. Thecosimilia, fossil corals, XVII. 97. Thecosomata, order of mollusks, XV. 358 Theft, morbid propensity to, XIV. 532. Theine, IX. 757-in tea, XXI. 82, 83-in holly, V. 199. Theism, XXI 185 THEISS, river, XXI. 179; XII 10. Thelphusa, genus of crustacea, VII. 541. Thelyphonus, genus of arachnides, III. Themis, planet, IV. 91 Themison, XIV. 454 THEMISTIUS, Greek orator, XXI. 179. THEMISTOCLES, XXI 179; IV. 199, 200, 201; III. 530—his expedition against Andros, 139-Athens fortified by, IV. THEMSCHE, town in Belgium, XXI. 179.

Thenard on white-lead, XIII 302. Thenardite, mineral, XV. 99. THEOBALD (Lewis), XXI 179 Theocracy, I. 470, 479, XV 659
THEOCRITUS, XXI. 180—poetry of, XVIII
103—Warton's edition of his works, XXI. 735. Theodobert, X. 5.

THEODOLITE, XXI 180—in surveying, 381, 847—theodolite-book, 348. Theodore of Mopsuestia, XII. 728; XXI 180.

THEODORETUS, XXI, 180 Theodoric, king of Metz, X. 4

king of the Ostrogoths, XII. 640; VII. 312; XX. 460—palace and mauso-leum of, XVIII. 812.

Theodorus, geometrician, XVII. 786 - sculptor, XIX. 858. THEODOSIA, XXI. 180. See Kaffa. Theodosian code, VI. 742; XVII 214. Theodosius, ancient mathematician, X. 501. - Roman emperor, XXI. 180; VII.

#### THE-THE

310 - reproved by St Ambrose, II 664—Antioch oppressed by, III 274—roof of his tomb at Ravenna, XIX 390. Theodota, XX. 374

Theodotion, his version of the Scriptures, IV. 700; XIX. 840

THEOGNIS, Greek poet, XXI 180

Theological education, in the Established and Free Churches of Scotland, XVIII 494, 495-in the United Presbyterian Church, 500.

THEOLOGY, XXI. 181-rational, XIV 606 -the real in, 619-Schleiermacher on, XIX. 726-philology the key-stone of, XVII. 541--in Germany, X. 593. See

Religion, Jesus, Christ, &c.

(Natural), XXI 181, 182—Paley on, XVII. 204—Sociates' admiration of, XX 389, 403—Epicurean errors of Lamaick, III 189, n-wonders disclosed

by the microscope, 197 Theon of Alexandria, X 502. - Greek painter, XVII 57. Theopathetic mystics, XV. 755. Theophanes, XIX 469. Theophany, XXI, 186 Theophilus, anatomist, II 754.

- bishop of Antioch, IX. 492. bishop of Alexandria, VII. 310 one of the compilers of Justinian's

Institutes, VI. 746 THEOPHRASTUS, XXI. 220; III 535, 536 - his treatise on plants ascribed to Aristotle, 550, n 2-on astronomy, 789 on geometry, X. 500.

Theophylact, religious dramas introduced by, VIII 143 THEOPOMPUS, XXI. 220

THEOREM, XXI 220, X. 508. THEORY, XXI 220.
THEOSOPHISTS, XXI. 220, XV 755

Theramenes, IV. 207, 209. THERAPEUTÆ, XXI. 220. Therapeutics, XIV. 463.

Therapon, genus of fishes, XII. 277 Theraponidæ, family of fishes, XII. 276,

THERESIENSTADT, town in Hungary, XXI.

Thereva, genus of insects, IX. 232. Thendion, genus of arachnides, III 380. Thenna, genus of insects, IX 257.

Thermal springs, XVII. 601.
Thermo-dynamics, principles of, XX. 617 -laws of, 618,

Thermo-electricity, discovery of, I. 976, XXI. 638, 649—conductibility of metals for, 652-currents of, ib .-- piles of, ib; Mellon's pile of, ib .- chemical effect of, ib -electric spark from the, 653-rotations of, 1b -Peltier's pincers of, 1b its relation to molecular structure, 655.

Thermo-electrometer, VIII. 590. Thermo-multiplier, I. 955; XX. 221. THERMOMETER, XXI. 220; XI. 260—inven-

tion of, I. 756; IV. 456, X. 375, n .consequences of the invention, I. 760the differential thermometer used to ascertain the mode of the propagation of heat among various bodies, 767height of, in connection with atmospherical refraction, IV. 148-successive improvements on, 457-application of, in barometrical measurements, 464oil thermometer, 457—different kinds of, ib —chronometrical, VII. 30—adjustof, 10—chronometrical, VII. 30—aquist-ment of, VI 352—its depression from saline mixtures, VII. 104—its use in meteorology, XIV. 645 et seg—register thermometers, I 763—Six's, XI. 724— Traill's IV. 460—metallic, I. 763—electrical air-thermometer, VIII 626

- (Differential). See Differential Thermometer.

Thermonatrite, mineral, XV. 98.
THERMOPYLE, XXI. 225; XI. 12—defended by Leonidas, XX. 500-amphictyony of. II. 727.

Thermoscope, L 941, XIV. 484; XXL 232 Theseium, or temple of Theseus, at Athens, IV 162—dimensions of, 167, n. 1. Tueseus, XXI. 225-reign of, IV. 192-

dance instituted by, VII. 646,

THE-THO

Thesiger (Sir Frederick), V 581 THESPIS, XXI 225—the Greek drama improved by, VIII 134\*. THESSALONIANS (Epistles to the), XXI

225 THESSALONICA, XXI 226; XIX. 581. Thessalus, physician, XIV. 454
Thessalus, XX 226, XI 12—its affairs settled by Philip, XIII. 764—gold from, XV. 230—comage of, XVI 370.

THETFORD, in Norfolk, XXI. 226

Thethys, genus of mollusks, XV 371. THETIS, wife of Oceanus, XXI. 226. - planet, IV 91

genus of mollusks, XV 350, 371fossil XVII 108. THEURGY, XXI 227, XV 755

Thevart (Abraham), his improvements in glass-making, X. 659

THIAN-SHAN, Asiatic mountains, XXI, 227; XVII 599.

THIBAUT (A F Justus), jurist, XXI 227. Thibet. See Tibet Thiblé (Madame), first female aeronaut,

II. 177

Thiebaut (M), his classification of books,

Thiel, Swiss river, XX 888 THIELT, town in Belgium, XXI. 227. Thierri, X. 4, 5 THERRY (J. N. Augustin), historian, XXI.

227, XIX. 574
Thiers (M), X 196 et seq—his ministry,
212—on the Jesuits in France, 223—his work on property, XVIII. 228, n 4.

- town in France, XXI 227. Thigh, muscles of the, III 38 Thigh-bone, in man, III. 34—in the mam-

malia, 82-birds, 86 Thing, Norwegian Assembly, XVI. 316, 317

Thinning woods, XXI, 273. THIONVILLE, town in Flance, XXI 227. Thirlwall, his History of Greece, IV. 218

THIRSK, in Yorkshire, XXI. 227. Thirst, XVII. 658. Thirty Years' War, IV. 303; XVIII. 649.

Thirty-nine Articles, petition against sub-scription to, V. 474 Thistle, order of the, XXI 228—British, XI 340; XIII 119 - French, 120 -Russian, 1b

Thistles of Buenos Ayres, XVII 776-of the Pampas, 624.

Thistlewood (Arthur), his plot, V. 627execution, 628. Tholobate, in architecture, III, 513

Tholus, or Tholos, in architecture, III, 513. THOMAS, of Erceldoune, XXI. 228 - (George), military adventurer, IV.

509, 691; XII. 50. - (M.), his Eloge on Descartes, I. 243, 247

(Mr), on Indian coins, XVI. 390, 391.

(Sr), island, XXI 228 (Sr), island in the Gulf of Guinea, XXI 229.

Thomas's (St), Hospital, XIII. 673. Thomasius, or Thomas (Christian), XXI 229—his attack on the docirine of witcheraft, III 313. THOMASTOWN, in Ireland, XXI 229.

Thomisus, genus of arachnides, III 382. THOMPSON (Sir Benjamin), Count Rumford, XXI. 229, I. 940, 941—on the impor-tance of cookery, VIII. 25—on finnel clothing, IX 654—on gunnery, XI 121, 122, 123—his photometer, XIII. 455; X 428-importance of his opinions on

the nature of heat, I. 941-on heat, XI. 260, 261 et seg., I. 940, 941, 942—Royal Institution established by, 941—prize given by, ib.

given by, ib.

(J. and G), of Glasgow, iron screw-ship built by, XX. 200.

(J. Vaughan), on the metamorphosis of crustacea, VII. 589, 544; of a species of barnacle, XV. 319—on echinoderms, XXI. 985.

- (WILLIAM), naturalist, XXI. 282on the genus hypercodon, XVI. 443
-his work on the Natural History of

### OHT-OHT

Thompson's rope-machinery, XIX 409.
Thomson (Adim, DD), his exertions to destroy the monopoly of Bible-piinting, IV. 704

Apocrypha question, IV 703 (ANTHONY TODD), physician, XXI.

(Dr), of Edinburgh, pointed out the fact of second attacks of small-pox, &c., in 1818, XXI 501

(Dr), his Introduction to Meteorology, XIV. 658

(JAMES), poet, XXI. 234-dramatic works of, VIII 164-his poetry, XVIII. 124-his defective manner of reading, XXI 172-his description of the spider, III. 375

(Mr), on logic, XIII 585 n., 607 n, et seq -his Laws of Thought, 585, n. - (Mr), on the source of the Jordan,

XVII. 185.

(Mr), his report on agricultural

(D1 R. Dundas), on the loss of barley in malting, V. 323.
(THOMAS), of Glasgow, chemist,

XXI 236-on sal-ammoniac, II. 719on barley, V 320; its loss in malting, 323—his article on dyeing, in this work, VIII. 272—on the specific gravity of sea-water, IV 403

(Dr Thomas), on the Himalayan glaciers, X 634—on the dhuns or val-leys of the Himalayas, XI. 438; their geology, 443.

(Prof. William), on electrical images VIII 534, I 990—on telegraphic conductors, XXI. 98

Thomsonite, mineral, XV. 75 Thon (T.), his work on insects, IX. 16. THONON, town in Savoy, XXI. 236. THOR, XXI. 236.

Thoracic duct, II. 761, 803, III. 63. - fishes, their fins and pelvis, III.

Thorax, human, Galen's description of, II. 753 - regions of, III. 1-bones, 9muscles, 38-nerves, 57-its structure with reference to breathing, XVIII. 652 -wounds in, XIV. 431.

- in mammalia, III. 76-reptiles, 87 -insects, IX. 37. THORDA, in Transylvania, XXI. 236. THORILD, Swedish author, XXI. 236; XIX.

Thorina, XV 65 Thorite, mineral, XV. 90. Thorium, VI. 488.

Thorlacius, two Danish authors, VII. 750. Thorley (Mr), his hive, III 295-on the management of hives, IV. 588

THORN, town in Prussia, XXI. 236. Thorn-apple, V. 202. Thorn-hedges, II. 269.

Thornback, fish, XII. 326; IX. 763; XVII. THORNBURY, in Gloucestershire, XXI. 236.

THORNE, in Yorkshire, XXI 236 - (Robert), on a north polar passage,

XVIII. 163. THORNEY, in Cambridgeshire, XXI. 236

Thorneycroft's boiler-plate shears, XII.

THORNHILL (Sir James), painter, XXI. 236; XVII. 77—daughter of, married to Hogarth, XI. 554—interior of the dome

of St Paul's painted by, XIII 670.
in Dumfriesshire, XXI. 237.
village in Yorkshire, XXI. 237. Thorns of plants, V. 79.

Thornthwaite (Mr), on the collodion process in photography, XVII. 547.

Thorshayn, in the Farce Islands, IX. 484.

THORWALDSEN (Albert), sculptor, XXI. 237; XIX. 864, 696—museum of, VII.

Thoth, Egyptian deity, VIII. 437; XI. 383; XV. 760. See Hermes. Thothmes, Egyptian kings, VIII. 460.

## THO-THU

Thorpe (Chief-Justice), VIII 772 THOU (J. Auguste De), historian, XXI 239—his Table-talk, II 738.

Thouars (Dupetit), admiral, X. 217, 221. Thought, XIV 560-form and matter of, 586—operations of, ib —discursive, XIII. 567, 570, 571.

Thouret (M), on mesmerism, XX. 419. THOUROUT, in Belgium, XXI. 289.

THRACE, XXI. 239 — gold produced in, XV. 230 — monarchy of, 414 — coins, XVI 368

Thrale (Henry), his intimacy with Dr Johnson, XII. 800.

—— (M1s) See Piozzi. Thrapston, in Northampton, XXI. 239 Thrasher, in zoology, XIV 226

THRASHING, XXI 240-by steam, II 264; by flail. IX, 73-thrashing-machine, II 282; portable, 281-invention of, 262; improved by Meikle, 282 Thrasybulus, IV 209 et seq

Thrasyllus, architecture of the choragic

monument of, III. 462. Thrasymenus (Lake), XVII. 242, 474—battle of, VI 291; XIX. 310 See

Perugia, lake of. Thraulite, nuneral, XV, 90

Thread, spinning of, XX 508, 511-goldthread, X. 703. See Weaving, Fibie, Silk, Cotton, and Woollen Manufactures lace, XIII 142.

of the spider, III 276 See Spider. Three Bodies, problem of the, I 828, IV. 105, III 809

RIVERS, town in Canada, XXI 240.
Thresher, fish, XII 322.

Thrips, genus of insects, IX 171. Thrissonotus, genus of fossil fishes, XIL

336; XVII. 126. Thrissops, genus of fossil fishes, XII. 336.

Thrombolite, mineral, XV 103.

Thornbus, in animals, XXI 574.
Throstle, VII 444, XX 511
Throttle valve, XX. 589, 599, 653
Throwing of silk, XX. 281—throwing-

machine, 284. Throwster, XX. 281.

Thrush, a disease of horses, XXI. 562.

—— bird, XVI 751—ant, 753—glossy,

752 - missel, 751, 752-pagoda, 754song, 751. Thuanus (J. Augustus). See Thon.

THUCYDIDES, historian, XXI. 240-on the demoralising effects of a pestilence at Athens, I 460, 461—his account of an eruption of Ætna, IL 193. Thugs of India, XI. 466.

Thule, X. 462.

Thulite, mineral, XV 85.

Thumb, opposition of fingers and, III. 41 —in the quadrumana, XIV. 136. See

THUMMEL (M August Von), German author, XXI 241.

Thummim, XVI 699.

THUN, lake of, XXL 241; XX 889-its temperature, VI. 777.

Swiss town, XXI. 241.
THUNBERG (Carl Petter), bottonist, XXI. 241—on the Japanese, XII. 690—his entomological works, IX. 8.

THUNDER, XXI. 242; XIV. 662-sound of, II 107—an electrical phenomenon, VIII 527, 582—cause of the rolling of, 588-distance, ib.

steam screw-ship, machinery of, XX. 668.

Thunder-bolt, VIII. 583. Thunder-rods, VIII. 608.

Thunder-storms, VIL 39; XIV. 663—dis-tribution of, XVIL 615.

Thundering Legion, III. 280, n. Thur, Swiss river, XX. 888; XXI 242. THUROAU, Swiss canton, XXI 242; XX 882.

THURIL, or Thurium, Greek city, XXI 242.

Thuringia, in Germany, porcelain factory of, XVIIL 486.

THURLES, Irish town, XXL 242, 288.

#### THU-TID

515-removed from office, 548-Cowper's intimacy with, VII 471

Thursday, I. 458, n.; VI 75.
Thurso, town in Caithness, XXI. 243great haul of salmon at, IX. 589, n 2. Thuthmosis, Egyptian king, XI. 386 Thyellina, genus of fossil fishes, XII 342 Thylacinus, genus of mammaha, XIV. 175—teeth of, XVI 447.

Thylmoleo carnifex, XVII 175-teeth of, XVI 447.

Thymalus, genus of fishes, XII. 245, 244. - genus of msects, IX. 114.

Thyme, plant, V. 202, XI. 745—oil of, XVI 496. Thymelæaceæ, nat. order of plants, V.

Thymotes, IV. 193

Thynnus, genus of fishes, XII 296-fossil,

- genus of insects, IX 195 Thyonidæ, zoophytes, XXI. 986 Thyreophora, genus of insects, IX. 254. Thyris, genus of insects, IX. 210 Thyroid cartilage, III 50. Thyrsites, genus of fishes, XII. 296.

Thyrsodeinæ, sub-family of fishes, XII Thyrsoidea, genus of fishes, XII 231

Thyrsus, in botany, V 115
Thysanoura, order of insects, IX. 26, 260. Tibaldi, paintei, XVII 73, 74. Tibbermore, battle of, V 406. Tibbus, African people, II 219, 226.
TIBER, 1ivel, XXI. 243; XII 637; XVII.

240, 242, XIX. 294-source of, XXI.

Tiberias, town, X. 374; XVII 186-Jewish patriarchate of, XII. 775-battle of, VIII 481

- lake of See Galilee, sea of. Therius (C. Nero Cesar), Roman emperor, XXI 243—reign of, XIX 334 his treatment of Sejanus, XX 36

Tiber, XXI. 245; III. 731, XI 439— climate, III 736—language, XIII 206 -plateau of, X 483; XVII 598-height of mountains, 643-goat wool, XXI. 906.

- (Litile). See Bulti - (Middle), XIII. 149.

Tibia, or shin-bone, in man, III. 35, 37in the mammalia, 82-birds, 86-reptiles, 88.

TIBULLUS (Albius), Roman poet, XXI. 247; XVIII 105.

TIBUR, in Latium, XXI. 248, 292 Tiburtine road, XIX. 228. TICAO Isle, XXI. 248.

TICHFIELD, or Titchfield, in Hampshire, XXI. 248.

Tichodroma genus of birds, XVI. 768. Ticino, river, XXI 248; XX 888. - Swiss canton, XXI 248; XX. 882.

Ticinus, battle of, VI 294; XIX 310. Tick in sheep, XXI. 579.

TICKELL (Thomas), English poet, XXI. 249. Ticket-of-leave system, for convicts, XVIII. 579-home tickets of leave, 580.

Tickets, railway, arrangements for issuing, XVIII. 767; for collecting, 769. Tides, XXI. 249; I. 778, 779; XVII 580

explanation of, by Newton, I 679discussions respecting the earth's figure led to an examination of the theory of, -theory of, 816-three classes of, 817 -laws of, 818-Airy on, ib -Kepler on the cause of, III, 800-Laplace on, 812singular phenomens of, in the Forth, VI. 749-in reference to navigation, XVI. 50-tide-currents, 66-tide basins, 79to find the height of, 51-effect of, on waves, XI. 217—abrasion by, XVII. 585 waves, XI. 217—abrasion by, A VII. 858—in the Polar seas, XVIII. 178—in the Shannon, XX. 92—peculiarity in, at Southampton, 453—in the Firth of Forth, IX. 793—Mediterranean, XIV. 470—scarcely perceptible in the Baltic, IV. 403—tide-wave, XVI. 64; propagation of, 74—length to which rivers are

#### TIE-TIM

Tie-beam, strain on, VI. 256—in carpentry, 373; XIX 383—level tie-beams in roofs, 393.

THEOR (C Friedrich), sculptor, XXI. 264 (Ludwig), poet, XXI 264; XVIII. 119—10mances of, XIX 291, 292 TIEDEMANN (Dietrich), XXI. 265

on the lymphatics, II 804—on zoophytes, XXI. 992, 983—on the phosphoresence of the medusæ, 998 Tiedemannia, genus of mollusks, XV. 361.

Tiemannite, mineral, XV 117 TIEN-TSIN, Chinese town, XXI 265.

Tierney (Mr), his opposition to Pitt's navy bill, V. 562-his duel with Pitt, 563on the expedition to Holland, 573-his motion for an inquiry into the state of the nation, 623

TIERRA DEL FUEGO, XXI. 265 Tiers état, X 45, 46, 49 et seq.

parti, X. 210. Tiflis, XXI. 265. See Teffis.

Tiger, XIV 169; XVII 632-of Asia, III. 739; Assam, 764; Hindustan, XI 211; Java, XII 704; Persia, XVII. 423; Sindh, XX 304; Sumatra, 804—tigershooting, 211

Tiger-moth, IX 214 Tight, meaning of the word, VIII 12 Tighth-pileser, III 778
Tigny (F. M G de), his work on insects,

IX. 21. Tigranes, king of Armenia, III. 615; XV.

284. Tigré, in Abyssima, II 56. IIGRIS, river, XXI. 265; IX 876; XVII.

607, 647,

TILBURY, in Essex, XXI. 266. Tile-ore, XV 112.

Tileacem, nat order of plants, V. 185 Tiles, for paving, V 735-100fing, ib.; XIX 374 — preparation of clay for, XVIII. 439—enamelled, 431—encaustic, 441-pan-tiles, XIX 374-manufacture of, in Holland, XI 583-for diains, VIII. 133.

Tilesius on the music of savages, XV. 716. Tilestone, XV. 198

Tilkerodite, mineral, XV 117. Tillage, II 286 See Ploughing.
Tillet, or Tillius (Jean du), his edition of

the Theodosian Code, VI. 744. Tillet's patent grate, XX 253. Tilley (Mr), his water-pressure blowpipe

for glass-blowers, IV. 793
TILLICOULTRY, in Clackmannanshire, XXI. 226-woollen factories at, VI 750. Tillissarch, in Fezzan, sculptures at, IX. 530

Tillorson (John), archbishop, XXI. 266
Tilly (Count), his military operations
against Gustavus Adolphus, XX. 849 defeated and killed, 850—Heidelberg plundered by, II 633, XI. 285. Thistr, in Prussia, XXI. 266—treaty of,

X. 147; XIX. 498, V. 602. Timanthes, paintings of, XVII. 54.

Timarcha, genus of insects, 1X. 150. TIMBER, XXI 267—anciently the principal material of houses, III. 433-sawing of, V. 754—in construction, VII. 322—destruction of, by the Limnovia terebrans, 542; XI. 224—dry rot in, VIII. 76, 77, 206; XVI. 98, 99-common rot in, VIII. 207—seasoning of, 209; XX. 168, 169—winter-felled, VIII. 210—effects of its immersion in sand, earth, or water, 211-its impregnation with foreign substances, 212-Pliny on the preservation of, ib.—examples of long duration, 213 - imports of, into the United Kingdom, 735-supply of, for the navy, XVI 100; quantity required, 101—exports of, from Norway, 328; from Quebec, in 1854, XVIII. 726; from Canada, VI. 150—in ship-building, XX. 166-different qualities of woods, 1b .- means of preserving, 167-seasons 10.—means of preserving, 107—seasons of felling, 170—strength of, 171, 172—weight, 173—timbers of a house, V. 746 et seg.; of a ship, XX. 184. See Building, Carpentry, Joinery, Planting, Strength of Materials.

# TIM-TIP

TIMBUCTOO, in Africa, XXI. 280; II. 228; X. 476-visited by Major Laing, 477-Dr Barth's residence at, 479.

Thus, XXI. 281—views of philosophers regarding the nature of, I 142, n 1; XIV. 562—measure of, IV 22—equation of, ib., 123-mean and true, 23-comparison of mean and siderial time, 24different kinds of, VII 4—characters of abbreviations of, V. 419—method of computing, among the Druids, VIII. 186-in relation to navigation, XVI. 34 - mean and apparent solar, 38 siderial, 35, 39-mode of finding mean xII. 401—as symbolised in liter oglyphics.
XI. 401—in phrenology, XVII 563.

in music, XXL 281; XV. 717

Time-ball, VII. 27.

Times newspaper, XVI 187-its proceedings in reference to the continental forgeries of 1840, 188—steam-printing piess of, ib -growth and circulation of, 1b .-- its correspondent's account of the battle of Alma, XIX. 502; of the battle of Balaklava, 505, of Inkermann, 506-Stoddart's writings in, XX 707lishment and cuculation of, XXI. 694.

Timia, genus of insects, 1X 253. Timmani language, XIII. 226 Timmerman (Col), on artillery, III. 691,

Timocharis on astronomy, III. 790. Timoleon, XXI 281—his military exploits ın Sıcily, VI 283; XX. 900.

Timomachus, Greek painter, XVII. 57. Timon, XXI. 281—scepticism of, XIX 707. Timon, island, XXI. 281—serpents of, XIX. 54.

TIMOTHEUS, Athenian general, XXI. 282. TIMOTHY, XXI 282—epistles to, ib.

Timur, or Tamerlane, XXI 282; VIII. 485, 486—his treatise on war, III. 620, n. 1-conquests of, 746; XVII. 438his defeat and treatment of Bajazet, VII. 320; XXI. 368, IV. 376—his invasion of Syria, XX. 911.

TIN, XXI. 283; XV 66, 114-wood and stream tin, 109—Phoenician trade with Britain for, V. 376—its compounds with copper, 277; VI. 497-use of its oxides as mordants, VIII. 279, 290, 317—its chlorides used in calico-printing, 316, 317—specific gravity of, XII. 88—beating of, into thin leaves, X. 703-in galena, XIII. 299-imports of, XV. 241dressing the ores of, ib -distribution of, XVII. 621-its muriate poisonous, XIV. 434—cohesion of, XX. 757.

Tin-mines, in Devonshire, VII. 763-Cornwall, 407; XV. 240, 211-England, VIII. 276—Europe, IX. 387.
Tin-ore, XV. 109—distribution of, XVII.

621. Tin-pyrites, XV. 121-tin-stones, 219. Tinamous, birds, XVI. 792. Tinamus, genus of birds, XVI. 792. Tinea, genus of fishes, XII. 256, 257 -

fossil, 346. Tinchebrai, battle of, VIII. 670. Tinctures, in heraldry, XI. 324.

Tindal (Matthew), XXI. 283—his legacy to Eustace Budgell, V 725.——(Nicholas), XXI. 283. Tinea, Lenus of insects, IX. 218. Tineites, family of insects, IX. 217. TING-HAE, XXI. 283.

Tingis, genus of insects, IX. 163. Tinkal, mineral, XV. 98. TINNEVELLY, in India, XXI 283. TINTERN, XXI. 284-Abbey, XV. 499; in

Wexford, XXL 848. TINTORETTO, painter, XXI. 284; III. 710; XVIL 7L

Tinville (Fouquier), X. 89, 94. Tiphia, genus of insects, IX. 195. TIPPERAU, in Bengal, XXI. 284. TIPPERARY, XXI. 284-population, XII. 509 agricultural statistics, 515, 517—joint-

stock bank of, XV. 488.
town of, XXI. 288.
Tippoo Saib, XI. 492 et seq.; XXI. 818—

war with, V. 539, 541—fall of, 567—defeat and death, XI. 502—his sons sur-

#### TIP-TOB

rendered as hostages to Lord Cornwalls, 500—his library, XIII. 431. TIPTON, in Staffordshire, XXI. 288. Tipula, genus of insects, IX. 227. Tipulariæ, family of insects, IX 224. TIRABOSCHI (Girolamo), XXL 288. TIRAÑAS, Spanish dance-tunes, XXL 288 Tires, Scotch island, XXI. 288-maible of. III. 526.

Tirhakah, Egyptian king, VIII. 464. Tirhoot, in India, XXI. 289 TIRLEMONT, in Belgium, XXI 289-battle of, V. 449-agricultural school at, IV 622.

TIRNOVA, town in Turkey, XXI. 289. TIROLESE, waltz-tune, XXI. 289 Tirolite, mineral, XV 103 Tiroon, in Borneo, V 47 Tirso de Molina. See Tellez. TIRYNS, ancient Grecian city, XXL 289 TISCHBEIN (John Henry), painter, XXI 289

- (J. H. WILLIAM), painter, XXI 289.

Tischendorf (Dr), on the probable exist-ence of old MSS in Constantinople, XIII. 386—fragments of the Bible published by, XVII. 209-on palimpsests. 210-his edition of the New Testament XIX. 837-his rules for determining the various readings of the Scriptures.

Tisdale (Captain), his practice with the American rifle, XI. 101. Tissaphernes, IV. 207.

Tissues of the human body, IL 778, 783 filamentous or cellular, 765, 786-adipose, 787-arterial, 789-venous, 792erectile, 799-nervous, 806-muscular, 821-particular tissues, 818-dental XVI 410 et seq -fibre tissues, XVII 652—molecule tissues, 649—cell, 650—tube, 653—mode in which they are nourished, 663

of animals, III 171.
of plants, V. 65—cellular, 66—vascular, 69—contents of, 72—woody, 69. Titanic acid, VI. 494

Titanitic iron, XV. 109. Titanite, mineral, XV. 110. Titanium, VI 494; XV. 67.

TITANS, XXI, 289.

Tittes, XXI. 290-in England, VIII. 744 Soliand, XIX. 750—Ireland, XII. 531—Selden on, XX. 37—incidence of, XXI. 63—injurious operation of, 1b., 64 -commutation of, 64.

TITHING, XXI. 290. Tithous, XI. 387.

TITIAN, painter, XXI. 290; III. 710, 716, XVIL 56, 57, 70-his estimation of the genius of Corregio, III. 368.
TITICACA (Lake), XXI. 291; II. 668; III.

129; IV. 822. TITLE, XXI. 291

Titmice, birds, XVI 759. TITUMEN, town in Siberia, XXI, 292. Titus (Colonel), his work entitled Killing no Murder, V. 417

- companion of St Paul, XXI 291. VESPASIANUS, Roman emperor, XXI. 292; XIX. 340—aich of, III. 487— Jerusalem taken and destroyed by, XIL 774: XVII, 194.

TIVERTON, in Devonshire, XXI. 292; VII. 764-lace manufacture at, ib.

Tryoli, XXI. 292—temple of Vesta at, III 444, 474, 486-villa of Adman near, 470. Tizard (Mr), on brewing, V. 319, 320—his plan of mashing, 325, 326—his objection to boiling wort, 327 - on porter-

brewing, 331. Tlascala, Mexican state, XIV. 725, 718. Tlatelolco, XIV 701.

TLEMECEN, or Tlemsen, African town, XXI.

Tmesisternus, genus of insects, IX. 145. Toads, XVII. 634; XIX 79—embedded in wood and stone, 79, 80—their power of fasting, III. 180—vessels in the lungs of, IL 797.

Toadstone, XV. 187, 245. TOBACCO, XXI. 298—plant, V. 201, 202—

#### TOB-TON

flower of, 124, 201 — of New South Wales, IV. 280, Canada, VI. 147, Latakia, XIII. 246, Flance, X 247-Greek, XI 16—Indian, 453—Mexican, XIV 717—of Virginia, XXI 598—value of exports from United States, 426—proposal for warehousing, V. 457-management of the duty on, transferred to the Excise, 534—heense paid by manufacturers of, XIII 435—exorbitant duty on, XXI. 61—narcotic properties of, XIV. 438

TOBAGO, Island, XXI 297-culture of the bread-fruit in, V. 301

Tobarra, town in Spain, XXI 297. TOBERMORY, in Mull, XXI 297. Tobol, Siberian river, XXI 298 Tobolsk, in Siberia, XXI 297; XIX. 521—climate, XIV 674

Tocantins, river, XVII 647.

Tocqueville (C A. M. Clerel de), XXI.
298—on the moral condition of France, in 1848, X. 232-on American penitentames, XVIII 571.

Tocuyo, river, XXL 536. Todawars, XI 467.

Todd (Col.), on feudalism in Asia, IX. 521-on the Rajpoots, XI. 164, 165, 166 -on the landholders of Rajast'han, 512, 514-on Hindu literature, 477.

(Dr), on senso-motory electricity, XVII. 671

- (Henry John), XXI. 301 — notices from his Life of Cianmer, VIL 481, 482 - (J. T), on the torpedo, VIII 573.
- (R Bentley), his Cyclopædia of

Anatomy, II. 74 Toddy-palm, V. 86, VI 306-toddy, XX. 798

Toderies, XI. 467. Todleben (General), XIX. 507. TODMORDEN, town in Lancashire, XXI. 301 Todus, genus of birds, XVI. 773. Toes (human), bones of, III 36, 37-

muscles of, 39. bones of, in quadrupeds, III. 82, 83; XIV 184—birds, III 86.
Tofana, a Neapolitan poisoner, III. 328.

Toga, XXI 301; XVII. 220. Togrul Beg, III. 774. TOKAT, town in Turkey, XXI, 301.

TORAY, town in Hungary, XXI. 301-wine, IV 314; XII 17; XXI 885. Token, as coin, XVI. 288-in printing, XVIII. 545.

Toland (John), XXI. 301. Tolebo, in Spain, XXI 302. - town in Ohio, XXI 302.

Toleration, degree of, among the Romans, XII. 772—favoured by the Indepen-dents, 372—Locke on, XIII. 547—the alleged tolerant spirit of paganism disputed, XX 380

Tolfa, alum works at, IL 637, 639 TOLLENS, Dutch author, XXI. 303; XI.

Tolls, first act for collecting, on highways, II. 262.

Tolly (Barclay de), X. 154, 155 et seq. Tolosa, town in Spain, XXI. 303. Tolstoy (M.), on the Russian forces in the late Turkish war, III 648.

Toltecks, or Toltecans, II. 653, 677, 678, 684, 695, 698; XL 77; XIV. 698, 720, 721.

Toluca, in Mexico, XIV. 723 Tomaszow, in Russian Poland, XXI. 303. Tomato, V. 201.

TOMB. XXI, 303--ancient Roman, III. 473 -characters of abbreviations on tombstones, VI. 419—tombs of the kings, in Egypt, VIII. 512—in Persia, XVII. 432.

Tombazite, mineral, XV. 116. Tomboro, volcanoes of, XVII. 589. Tometes, genus of fishes, XII. 246. Tomicus, genus of insects, IX 142. Tomkins on Jesus Christ, XXI. 212.

TOMLINE, or Pretyman, XXI. 303 Sec Pitt (William) Tomlinson (C.), on ventilation of coal-pits,

VII. 123. Tomsk, in Russia, XXI. 303; XIX. 521. Tonadillas, Spanish dance-tunes, XXI. 288.

### TON-TOR

TONALITY, in music, XXI 303. Tone, in music. See Music (Wolfe), XII 497, 498, 499. Tonga Islands, XXI. 803. Tongataboo, II 735. Tongres, in Belgium, XXI 303 Tongue, muscles of the, III 39-anatomy

of, 48-uses of, 49-comparative anatomy of 100-contraction of the ligaments of, 123-papillæ of, XVII. 677 action of, in sucking, XVIII 76, in drinking, ib -in the mammalia, XIV 133—diseases of the, in domestic animals, XXI. 564—of serpents, XIX. 47

- or cry of hounds, XI 769. Tongueing, in jomery, V 750 Tonkm's diving apparatus, VIII 58 TONNAGE AND POUNDAGE, XXI 307 of ships, XXI 303; XX. 163-

the United States, XXI. 426 TONNEINS, town in France, XXI 307 TONNERRE, in France, XXI 307, 955. TONQUIN, XXI. 307, VII. 47—rivei, XVII

Tonsils, III 48, 53, Tonson (Jacob), VII. 356; XVIII 328 TONTINE, XXI. 307—the nominees in tontines, III. 228-government schemes

for raising money by, 230

Tooke (John Horne), XXI 307—his etymological riddles deduced from false principles, L 61—charged with high treason, V 553—trial and acquittal, 555—in grammar, X 777 et seq (Thomas), political economist,

XXI 310. Toola, in Russia, XIX 521. Tooman Bey, VIII. 487 Toon-wood of India, XI 444, 454

Toondras, in Russia, XIX. 515. See Tun-

Tooran Shah, VIII 483. Tooth. See Teeth. Toothache-tree, XVII. 762. Toothwort, plant, V. 203 Topajoz, river in Brazil, V. 292.

Topaz, X. 447; XV. 88; XVII. 623—its crystallisation, VII. 555, 563—its pyroelectricity, VIII. 559- electrical phenomena produced by its cleavage, 564
—optical phenomena of Brazilian, XVI. 668, 690—system of rings in, 652, I. 913—in Brazil, V. 293. Tope, fish, XII 322

Topham (Captain), his account of a meteor-olite, XIV. 631.

TOPIARY WORK, in gardening, XXI 310. Topical colours, in dyeing, VIII 316. Toplady, hymns of, XII. 189. Toplaty, hymns of, All. 169.
Toplatz, town in Bohemia, XXI. 311.
Topsails, how to take in, during a gale,

XX. 19. Torsnam, in Devonshire, XXI. 311. Torbanehill gas-coal, VII. 118; XIII. 497. TORBAY, in Devonshire, XXI 311. TORDENSKIOLD (P. Wessel), Dutch admiral, XXI, 312.

Tordesillas, town in Spain, XXI. 312. Torella (G.), on the venercal disease, XX 817, n 3.

Torelli, life and character of, I. 697 and

n 4. Toretto, sculptor, VI. 198.

Torfæus, XIV. 2. Torgau, Prussian town, XXI. 312. Torgoch, angling for, III. 158. Torges, XXI. 312—origin of the, V. 387-

derivation of the word, 428. Tornado. See Whirlwind, Cyclone. Tornatella, genus of mollusks, XV. 372fossil, XVII, 111.

TORNEA, in Finland, XXI. 812. Torneo, river, XIX. 516—in Lapland, XIII

TORO ARBUCALL, Spanish town, XXI. 812. TORONTO, in Canada, XXI. 312; VI. 184—climate, 189, 140—increase of population, 144-value of imports, 152 way system of, 155 — meteorological observations at, XIV. 086. Torpedinidæ, family of fishes, XII. 327,

Torpedo, fish, XII. 326, 327-electricity of,

### TOR-TOU

I 738; VIII. 523, 530, 572; VII 673; XVII. 636-Mr Cavendish's attempts to imitate its effects by electricity, I 988; VI 351-Ingenhousz's experiments on, XII 380

Torpedo, genus of fossil fishes, XII, 342
TOROFETZ, Russian town, XXI 314
TOROHATY, III 180. Sec Hybernation.
TORQUAY, in Devonshite, XXI 314
Toiquemada, inquisitor, XII 388, 389 Torre (Della), on the brain, II 818-on the muscles, 821

TORRE-DEL-GRECO, XXI 315. Torregiano (Pictio) See Torrigiano

Torrens (Lake), in Australia, XXI 315. — (Mi), on the advantages of coined money, XV 418.

Torres, Spanish navigator, New Holland seen by, IV. 252, also Papua, 262; and the New Hebrides, 265

Novas, town in Portugal, XXI. 315. Straits, IV 252.

VEDRAS, town in Portugal, XXI 315—lines of, ib , V 608 , IX 806 , XXI 707, 821, 823

TORRICELLI (Evangelista), XXI, 315-liis invention of the barometer, IV. 450-on hydrodynamics, XII 70, I 596-on mechanics, 593-on pneumatics, XVIII.

Tornd zone, X 483

Torrigiano, sculptor, XXI. 316, XIX 803, 865—his tomb of Henry VII, III 449.

TORRINGTON (Great), in Devenshire, XXI. 316

Torshot, or Torjok, Russian town, XXI.

Torsion (force of), Coulomb on, VII. 462. Torsion-balance, IV. 386; XIV. 4; VIII. 549—employed in determining the earth's density, I. 835.
Torsk, fish, XII 269.

Tortoise, XIX. 17, XVII. 634—hybernation of, II. 52—bones of, III. 86 et seq. -case of one which lived six months without the brain, 176; of another which survived without the head, 177—

then power of fasting, 180. Tortoise-enclinite, XVII. 99. Tortoise-shell, XIX. 20 - ware, XVIII. 433 TORTOLA, Island, XXI. 316. Torriona, Italian town, XXI. 316. Tortosa, Spanish town, AXI. 316. Tortrices, family of insects, IX. 215. Tortrax, genus of scrpents, XIX. 55.

Tortuga, bucaneers of, V. 707 et seq. Torture, XVIII 575—inflicted in English prisons, 568—in China, VI. 564. Torus, in botany, V. 118—in architecture

III. 468, 476, 513.
Torwood, camp at, V. 414
TOSCANELLA, in the Papal States, XXI.

Tosorthros, Egyptian king, VIII. 454. Tostig, VIII. 668.

Totanus, genus of birds, XVI. 805.
Totalla, chief of the Goths, Rome occupied by, XIX. 368.

Totipalmæ, family of birds, XVI. 813. Tornes, in Devonshire, XXI 316. TOTONICAPAN, in Central America, XXI.

Tott (Baron de), on the catacombs at Alexandria, II. 472 TOTTENHAM, in Middlesex, XXI. 316. Tottenhoe limestone, XX. 712

Toucans, birds, XVL 779; XVII. 633. Touch, sense of, XIV. 565; XVII. 677 in various animals, III. 178; XIV. 135—in bees, IV. 572; the crustacea, VII. 538; insects, III. 177; IX. 44; fishes, XII. 221-its acuteness in the blind

IV. 773, 777, TOUCH-NEEDLE, XXI. 816. Toul, town in France, XXI. 816. Toulon, XXI. 317-events at, in 1793, X.

80—fire in the arsenal of, 227.
Toulouse, XXI. 317; X. 405—Academy of Floral Games at, II. 61—battle of, V. 614; XXL 827-population, X. 277university of, XXL 448.

#### TOU-TRA

Toulouse (Count of), V. 448 Toultcha, VII 654 Touracos, birds, XVL 784 Touraine, in France, X 277. Tourinho (Pedro de Campo), V. 280. Tourmaline, XV. 89-py10-electricity of VIII. 529, 557-optical properties of, XVI 647, 648—dichroism in, 666—artificial, 648 and n

Tourment, Cape, VI. 133.
Tourmament, XXI. 318; VI 610 et seq;
VIII. 230; XI 321.

Tournay, town in Belgium, XXI 318-

siege of, in 1709, V 451 TOURNEFORT (J Pitton de), XXI 318on zoophytes and stalactites, III 169. Tourneur (Pierre le), XXI 319

Tourniquet, XX. 825 Tournon, town in France, XXI 319. Tournus, town in France, XXI 319 Tours, town in France, XXI. 319-popu-

lation of, X. 277
Tousoun Pasha, III. 365; VIII. 493.
Toussaint (Louverture), XXI 319; XI. 256—base treatment of, V. 591.

TOWER HAMLETS, XXI 319 -marchitecture, III 513-of London

XIII 670-of the winds, in Athens, VII 774; III 139

Towers (M1), on shelter for gardens, XL 698.

- (Round), in Ireland, III 284; VI. 240, 755; VIII. 216, XIII. 83, 86, XIV. 371, 377, XV. 410; XX. 331; XXI 409. Townley (Richard), on the elastic force of the air, IV 462; I. 729—his micrometer, XIV 743.

Towns, site and laying out of, III. 493; XIV. 443; town-gardens, III. 494—draining of, 495; VIII 125—cause of the atmosphere of being deletenous to plants, V 106, 107-fortification of, IX. 813. See Sanitary Science.

Townsend (Mr), on language, XIII 198 et

Towton, battle of, VIII. 691.

Towy, river, VI. 52. Toxicology, XIV. 432, 463; XVIII. 127 See Poison.

Toxoceras, fossil mollusks, XVII 113. Toxophora, genus of insects, IX. 234. Toxotes, genus of fishes, XII. 301, 303-fossil, 345

Toxotus, genus of insects, IX. 146. Tracery, in architecture, III. 513-of windows, XXI. 784—element of the, ib.

ioints, ib.

Trachea, in man, III. 66—in brutes, 102—surgical treatment of diseases of, XX. 832-its disorders in the domestic animals, XXI. 571.

Tracheliaste, zoophytes, XXL 982. Trachelides, family of insects, IX. 193. Trachelium, in architecture, III. 513. Trachelochismus, genus of fishes, XII 307. Trachelyopterus, genus of fishes, XII. 262. Trachenchyma, tissue in plants, V. 70.
Tracheotomy, XX. 833—in the domestic animals, XXI. 572.

Trachichthys, genus of fishes, XII. 288. Trachinotus, genus of fishes, XII. 297-fossil. 345.

Trachinus, genus of fishes, XII. 273. Trachyderes, genus of insects, IX 144 Trachydermis, genus of fishes, XII. 282. Trachy-dolerite, XV. 138.

Trachynotus, genus of insects, IX. 129. Trachypterus, genus of fishes, XII. 207,

Trachyrkamphus, genus of fishes, XII. 315. Trachys, genus of insects, IX. 105. Trachytes, rocks, XV. 182—their association with dolerites, 191.

Traction, action of the muscles in, III. 40. - line of, XX. 539.

Tractors, Perkins' metallic, XX. 415. TRACY (A. L. C. Destutt de), count, XXI. 319—on metaphysics, XIV. 565, n. 5, 570—on political economy, XVIII. 244, n.; 229, n.

Trade, errors respecting the balance of payments, IX 435—profits of, with Transpiration of leaves, colonies, VIL 141—mode of conducting Transplanting, XL 695.

## TRA-TRA

it in China, VI. 590-of France, with foreign nations, X 259 See Commerce. Political Economy.

TRADE MUSEUMS AND SCHOOLS, XXI. 321. Trade-winds, XIV 647; XVIL 577, 614in South America, IL. 671

Trades, their effects on health, XIV. 442 -hst of those requiring license XIII 435-necessity of removing offensive trades from towns, XIX. 619don, XIII 660; Paris, XVII 284.
Trades' House, Glasgow, X. 653.
Tradition, XXI 325—mistaken traditions

rectified by philology, XVII 541-received by Papists as an addition to Scripture, XVIII 337.

TRAFALGAR, Spanish cape, XXI. 325 battle of, V. 598, VII. 128; XVL 138, XXI, 725.

Traffic, on railways, passenger, XVIII 787, 789—goods, 788, 789—development and distribution of, 791.

Tragacanth, gum, V. 190.

Tragedy, Aristotle on, III 559—meaning of the word, IV. 348—Greek, VIII. 138 -Roman, 141-French, 149

Tragi-comedy, French, VIII. 153. Tragocerus, genus of insects, IX. 145 Tragopa, genus of insects, IX. 170 Tragopan, genus of birds, XVI 790. Tragos, fossil sponges, XVII 93.

Traill (James), of Ratter, his improvements in the agriculture of Caithness, VI. 62. (Mr), his gaidening in Egypt, VIIL 409, n. 3

(Prof), his account of an albino family, IL 448—on the ruins of Babylon, IV. 845-his register thermometer, on ink, XII. 383-on the connection between the temperature and magnetism of the globe, XIV 11 - his outlines of Medical Jurisprudence, 424 -his method of detecting mercury in cases of poisoning, 433-on the Caling whale, 228—on the character of Roscoe,

Training, VIII 24-among the Greeks, XIX. 851; Sparians, XX. 503—of fruit-trees, XI. 697, 705, 709.

Trains of mechanism, XIV. 400, 404wheelwork, 400-epicyclic, 401-in hydraplics, XX 200.

TRAJAN, Roman emperor, XXI. 325—reign of, XIX. 341—his war with the Parthians, XVII. 312-his pillar, XIX. 841—his bridge over the Danube, VII. 652; XVII. 641—Egypt under, VIII.

Trajanus Decius, reign of, XIX. 348. Tralke, Irish town, XXI. 825; XIII. 75. TRALLIANUS (Alex), XXI 325; 11, 466; XIV. 455, XX. 814.
Tram-roads, XVIII. 752, 753—American,

754

Transmel-net, IX. 636; XIX. 89, 91. Transmini, his work on the silk-worm, IX. 23.

Trance, XVII 700. TRANENT, Scotch village, XXI. 825. TRANI, scaport, Naples, XXI 325. Tranquebar, in India, XXI. 325. TRANSCAUCASIA, XXI. 325; XIX 551. Transcendental philosophy of Kant, XIII.

Transcribers of books, before the invention of printing, IV. 706.

Transept, in architecture, III. 513.

TRANSFIGURATION, XXI. 325

Transit instruments, IV. 152—circle at Greenwich, I. 850; III. 817. — of planets over the sun's disc, IV.

Transition cells, XVII. 650. - rocks, XVII. 587. See Geology. Transitive verbs, X. 722.

TRANSMIGRATION, XXI. 826stood by the Hindus, I. 468; XI. 470the doctrine imported into India from Egypt, XV, 762

Transom, in architecture, III. 513. Transparency, XIII. 451. Transpiration of leaves, V. 108.

#### TRA-TRE

TRANSPORTATION, punishment of, XXI. 326, VII 139-penal servitude substituted for, 150; VIII 750 - numbers sentenced to, 1b -- origin of, XVIII 576 -reaction against, 579-gradual abandonment of, 580-abolition of, 581cessation of, to New South Wales, XX.

Transporting machines, XIV. 415. Transposition, in languages, XIII 189 et

TRANSUBSTANTIATION, XXL 326; XVIII. 336-Gibbon's argument against, I. 154 -Cranmer on, VII. 484-first use of the term, XVII. 483.

TRANSPLVANIA, XXI 326; IV. 309; XII, 20-collection of gold in, V. 46-height of mountains in, XVII 642-its alliance with Sweden, XX. 851.

Trant (Captuin), on the Turkish army, III 657, n 1

Trap-rocks, XV. 134 - classification of, 155-form and position, 187-distinc tion between intrusive and contemporancous trap, 188-dykes and veins of, 189-absorbent property of, VII. 108as building-stone, XX. 711 Trapani, XXI 326; XX 245, 255

Trapelus, genus of reptiles, XIX 32. Trapezoid, X. 508-to find the area of, XIV 503

Trapezus, XXI. 327.

Trass, or terrass, for mortar, XX. 714. TRAVANCORE, in India, XXI. 326-Nestorians in, XVI. 152.

Traverses, in fortafication, IX. 819 - in

railways, XVIII. 777.
Thawl-net, IX. 636; XIX. 89, 92.
Treacle, distinguished from molasses, XV. 310-microscopic lenses made by, XIV

769. Tread, in horses, XXI. 562.

Tread-mill, XIII. 278; XVIII. 573—its effect on health, XIV. 445. TREASON, XXI. 326-punishment of, V.

514. Treasure, rates of conveyance of, in H. M 's ships, XVI. 116

Treasurer of the Royal Household, XI.

TREASURE-TROVE, XXI. 328; XVIII. 467. TREASURY, XXL 326

Treaties, commercial, VII. 195-importance of, in history, XI. 539-whether all treaties are annulled by war, V. 588—treaty of the three kings, IV. 308. Trebla, battle of, VI. 294; XIX. 310.

TREBIZONDE, or Trebisond, XXI. 326; TV. 744.

Treble. See Music.

Trecento, a style of architecture, III. 450. age of Italian literature, XII. 660. Trecul on the physiology of plants, V. 102. TREDEGAR, in Monmouthshire, XXI. 327. TREDGOLD (Thomas), engineer, XXI. 827 -on the strength of tlinber, &c., I.

876; of ropes, XIX. 402—his formula representing the relation of the temperature and pressure of steam, XX.

Tree of Life, I. 453; XXI. 197. Tree-climber, fish, XII. 289. Tree-ferns, V. 84, 85. Tree-frogs, XIX. 78. Tree-scrpents, XIX. 57.

Treenails, oak, strength of, XX. 188. Thees, XXI. 327; V. 78—dimensions of their stems, 101—age of, 168—fruit trees, XI. 702 et seq.—nursery culture of, XVII. 766—producing substitutes for soap, XX. 366—when a tree should be cut down, XXI. 268. See Planting, Timber.

Treffer (Florian), on the classification of books, IV. 715. Trefoil, seeds of, as a dyestuff, VIII. 297.

- in architecture, III. 518.

Tregellis (Dr), on palimpsests, XVII. 209, 210—his edition of the New Testament, XIX. 837.

Treitschke (Frederick), his work on in-scats IX. 15.

Trollis girders, XX. 781.

## TRE—TRI

Tremadoc, embankments at, VIII 644,

Tremadota, zoophytes, XXI. 979, 976, 978. Tiemandraceæ, nat order of plants, V.

Trembley (M), on the effects of electricity on the pulse, VIII 602 Tremiti islands, XX. 242

Tremoctopus, genus of mollusks, XV, 401. Tremolite, mineral, XV 81.

Trenching, II 289—trenching fork, 274. Trendelenburg on logic, XIII 577, n, 578, n et seq.
Trengrouse (Mr), on the use of rockets m

shipwreck, XIII. 441

TRENT, Austrian city, XXI. 327

COUNCIL OF, XXI 328, XVIII 825,

826—summary of its decrees, 336—on predestination, 179 — concerning the Vulgate, IV 701.

Theor. XXI. 327; XVI. 338, 340; XX 529, XIII 491—warping on the banks of, XII 618—iron bridge, 558, 559-Trent and Mersey Canal, VII. 754.

TRENTON, in New Jersey, XXI. 328military operations at, 751 Trepang, XXI. 985, IV. 300, XVII. 100.

Trephine, use of, XX. 826, 827 TREPTOW (New), town in Prussia, XXI.

Treschow, Danish author, VII. 750. Tressure, XI 330

Tret, in commerce, III 595. Tretosternon, fossil tortoise, XVII. 153 Trevelyan (W. C.), on the aurora borealis, VIII. 589.

(Mr), his experiments on electric currents, XXI 632

TREVES, town in Prussia, XXI. 328 massacre of the Jews at, XII. 778-government of, XIX 145.

Trevigno See Rovigno. Treviranus on the brain, II. 820, 821. TREVISO, Austrian town, XXL 328

Trevithick (Richard), I 882—his locomotive engines, ib., XVIII 779—his departure to America, I 882 TREW (C Jacob), XXI 328.

Trezza (la), town in Sicily, XX. 244. Triacanthus, genus of fishes, XII. 313. Trienophorus, genus of entozoa, XXI 979. Triakis, genus of fishes, XII 324

Trial by battle, VIII. 230. See Ordeal. Than by backs, VIII, 230. See Ordeal.

— jury See Jury.

TRIANCLE, XXI. 328; X. 507 et seq—to find its area, XIV. 503.

Thangulation, IX. 555, XXI. 334, 835,

Triascope, XIII 39.

fishes of, XII. 349, 350; XVII. 125, 640—ichthyodorulites, 117—in Spain, XX. 483.

Tribe, Irish, XII. 523—the twelve tribes, XVII. 192. Tribonian, one of the compilers of Jus-

tinian's code, VI. 745. Tribunal, international, XIII. 289. TRIBUNE, XXI. 328; XIX. 299—military,

302 ; III. 681.

Tribute, derivation of, from colonies, VII. 140. Tricala, Turkish town, XXI. 350.

Trichechus, genus of mammalia, XIV. 178. Trichiasis in animals, XXI 577.

Trichides, family of insects, IX. 127.

TRICHINOPOLY, in India, XXI. 828; XI.

Trichites, fossil mollusks, XVII, 106. Trichiurus, gonus of fishes, XII. 296.
——electricus, VIII. 577.

Trichius, genus of insects, IX. 127. Trichocephalus, genus of entozoa, XXI.

Trichocera, genus of insects, IX. 228. Trichoda, animalcules, III. 202. Trichodon, genus of fishes, XII. 278. Trichoglossus, genus of birds, XVI. 781. Trichomycterus, genus of fishes, XIL 263. Trichonotus, genus of fishes, XIL 307. Trichophorus, genus of birds, XVI. 752. Trichoptera, genus of insects, IX. 180. Trichopus, genus of fishes, XIL 290.

TRI-TRI Trichosoma, zoophytes, XXI. 981. Trichotropis, genus of fossil mollusks, XVII 110. Triclasite, XV. 89
Triclinohedric system of crystallisation, XV. 49—twin crystals in, 53
Tricocephalus, zoophytes, XXI. 981
Triconodon, genus of fossil mammals,
XVII. 161 Tridacna, genus of mollusks, XV 349 Tridacnidæ, family of mollusks, XV. 349 Tridactylus, genus of insects, IX. 158. TRIDENT, XXI. 329. TRIESTE, XXI 329 Triewald's diving-bell, VIII 62 Trigger of a gun, XI 99—hair-trigger, Trigla, genus of fishes, XII 280, 282. Triglopsis, genus of fishes, XII 282. Trigno, river, XX 238 Trigona, crustacea, VII 541 - fossil mollusks, XVII. 108. Trigones, insects, IX 203
Trigonia, genus of mollusks, XV. 349, 347
—fossil, XVII. 106. Trigoniadæ, fossil mollusks, XVII 106. Trigonocephalus, genus of serpents, XIX. Trigonoceras, fossil mollusks, XVII. 112. TRIGONOMETRICAL SURVEY, XXL 330. - canons, XIII. 565 TRIGONOMETRY, XXI. 338 -introduction of, I 551-improvement in, during last century, 701—characters of abbreviations in, VI 419 Trigonosemus, fossil mollusks, XVII. 108 TRIKHALA, Turkish town, XXI 850. Trilhacese, nat. order of plants, V 210. Trilobites, VII 543, XVII 101, 102. Trim, Irish town, XXI 350 Trimera, section of insects, IX. 151. Trimmers, in carpentry, V 748 TRINCOMALIE, in Ceylon, XXI 350, VI Trincuræ, family of insects, IX. 258 Tringa, genus of birds, XVI. 803
Tringab, West India island, XXI 251mtch lake in, XVI. 100, XVII 602 TRINITY, XXI. 193-Howe on, XI. 789-Dr Samuel Clarke on, VI. 757—pun-ishment of the denial of the IV 754 doctrine of the, not held by Quakers, - College, Dublin, XII. 532; XXI -Cambridge, 466—Oxford, 459 - House, London, XIII, 662 Oxford term, XXI 458. TRINO, Italian town, XXI, 352. Trinucleus, trilobite, XVII, 101, 102. TRIO, OI Terzetto, in music, XXI. 352 Trionyx, genus of reptiles, XIX. 21-fossil, XVII. 153. Triphane, mineral, XV. 72. Triphyline, mineral, XV. 101. Triphyllus, genus of insects, IX. 142. Triplax, genus of insects, IX. 151. Triplet microscope, XIV. 775. Triplite, mineral, XV. 101. Tripod, VII. 709. Tripodes in ancient Athens, IV. 164.
Tripoli, in Barbary, XXI. 352; II 223—silk of, XX. 277—weights and measures, XXI. 814 See Barca in Syna, XXI. 354.
mineral, XV. 69—composed of infusoria, XVII 94. TRIPOLITZA, town in Greece, XXI 354sacking of, m 1821, XI. 25. Trueme, XX. 117 Trisection of angle, III. 143. Trismegistus. See Hermes Trissino, his tragedy of Sophonisba, VIII. Tristan (General), IV. 832. Tristornagh, in Westmeath, XXI. 840, 841. Tristoma, zoophytes, XXI. 980. Tristychius, genus of fossil reptiles, XII. Tritoma, genus of insects, IX. 151. Tritomite, mmeral, XV. 91.
Triton, genus of mollusks, XV. 365—fossil, XVII. 110. - reptile, XIX. 83.

TRI-TRO Tritonia, genus of mollusks, XV. 390-ova, TRIUMPE, XXI 354-triumphal arch, III 418-road, XIX. 228 Trumvirate, first Roman, XIX. 324 second, 328; III 283 Triuridaceæ, nat order of plants, V. 215 Trivia, fossil mollusks, XVII 110. Trivium, in ancient schools, XXI. 444 Tria, genus of insects, IX. 248. Troad, comage of, XVI. 375. TROAS, XXI. 354. Trochanters, III. 34 Trochetia, genus of annelides, XI 307 Trochidæ, mollusks, XVII 110 Trochilus, genus of birds, XVI 769 Trochoceras, fossil mollusks, XVII 112 Trochocyathus, fossil corals, XVII. 97. Trochotoma, fossil mollusks, XVII 109, 111 Trochus, genus of mollusks, XV. 382 Troglodytes, in Arabia, III 357 - genus of mammalia, XIV. 137 dentition of, XVI. 456, 457. genus of birds, XVI. 756 Trogon, bird, XVI 779 Trogontherium, fossil animals, XVII. 173. Tiogositæ, family of insects, IX. 143. Trogulus, genus of arachmdes, III 387. Trogus Pomperus, Roman historian, XXI. 354; XIII, 29 Trolling, a mode of fishing, III 158. Trombidium, genus of arachnides, III. 387. Trombone, XV. 713. TROMP (M. H. Van), Dutch admiral, XXI 355, V. 415, 422, XI. 574 et seq Trompe, or water-bellows, XII. 183 Thon, or Trond (St), town in Belgium, XXI. 355. Tronchet (M.), X. 74 TRONDHJEM, in Norway, XXI. 355—ch-mate of, XVI. 328. Trondray, one of the Shetland Islands, XX. 113. Tronto, river, XII. 688 TROOK, m Ayrshire, XXI. 355—harbour of, IV. 333—railway to, XIII. 88. Troop-horse, XI. 657 Troopstie, mineral, XV. 100. Tropscolaces, nat order of plants, V. 188. Tropes, in rhetoric, XIX. 132, 133. Trophon, fossil mollusks, XVII. 110. Tropic-bird, XVI. 815. Tropical hot-houses, XI 729. Tropics, IV. 11; X 481. Tropidia, genus of insects, IX. 241. Tropidonotus, genus of scrpents, XIX. 58. Troppau, in Austrian Silesia, XXI 355congress at, V 631. TROSACHS, in Perthshire, XXI. 355. Trotman's anchor, III. 118, 119; XX. 24. Trotter (Mr), charges against, as paymaster of the navy, V 599, 600.

(Mr), on poultry, II. 356. Trotting of horses, XI. 656, 675.
TROUBADOURS, XXI. 355; VII. 536—era
of, XIV 458—subject of their poetry, XVIII. 107. Trough galvanic battery, XXI. 610 et seq. Troughton (Mr), his astronomical instru-ments, III. 808 — transit instruments, IV 152, 153—mural circle, ib.—wire micrometer, XIV. 743. Trouin (Duguay), French admiral, V. 282. Trous-de-loup, 1X. 799 Trout, common, XII. 242, IX. 763-sea. XII. 240—bull, 1b., 242; IX. 617—great lake, III. 156. Trout-fishing, III. 152, 156. Trouvères, literature of the XVIII. 148. Trouveurs, VII. 586. TROWBRIDGE (Sir Thomas), admiral, XXI. 855; XVI 184, 185 - in Wiltshire, XXI. 355. Trowsers, V. 313.
Trov, XXI. 356—Bryant's opinions on, V. 706.

town in America, XXI. 359.

TRO-TUB TROY-WEIGHT, XXI 359; III 584-origin of the name, XXL 807-table of, 808-Scottish, 809. TROYES, town in France, XXL 359-population, X 277. Truck, or barter, IV. 478. Trudaine's burning lens, VI. 14. Truffies, V 217, 146—of Dordogne, VIII. 107—of Charente, VI 421. THUMAN (Joseph), theological writer, XXI. TRIMPET, XXI. 360; XV 712—articulate trumpet, XXI 360, II 106; IV 454
Trumpet-flower, order of plants, V 200 Truncatipennes, insects, IX. 81, 83, 84. Trundles, XIV. 396 Trunk, of the elephant, III 100, XIV 194 of the human body, legions of III. 1—osteology of, 4—muscles of, 39 Trunk-dramage, VIII 130 Truran (Mr), his description of a hot-blast furnace, XII 545, 546, 551 TRURO, town in Cornwall, XXI 361. Truss, in architecture, III 513—in carpentry, V. 749, in roofs, XIX 381 trussing in ship-building, XVI 97, XX. 181, 182 Trustees, Scottash Board of, VIII. 396roads, XI 433. Truth, the progress of, I 120-Dr Beattle on, IV 531—influence of, XIII 368—relations of logic to, 576—a duty to our fellow-men, XV. 566-necessary truths, XIV. 597. Truxalis, genus of insects, IX. 159. TRUXILLO, town in Honduras, XXI. 362; XI. 612 in Peru, XXI 361; XVII. 474.
in Spain, XXI 361
in Venezuela, XXI 361. Trygon, genus of fishes, XII. 327-Trygonidæ, family of fishes, XII 327. Trygonoptera, genus of fishes, XII 328 Trygonorhina, genus of fishes, XII 327. Trypauchen, genus of fishes, XII. 306. Trypeta, genus of insects, IX. 252. TRYPHIODORUS, Greek poet, XXI. 362. Tryphon, genus of insects, IX 188 Trypoxylon, genus of insects, IX. 196. Trystachus, genus of fossil fishes, XVII 117. Trythings, II 481 Tsabaism, in Egypt, XV 764. Tsana, lake. See Dembia Tsarskoe-selo, town in Russia, XXI 968 Tschadda, affluent of the Niger, II. 214; XVI. 266. Tscherkask, VII. 423 Tscherkausen (E. Walter Von), XXI. 862-his burning mirror, VI. 2, 10, 13. Tsebaoth, (El), name of God, XXI 189. Tsetse, African fly, II. 218—its limited dis-tribution, XVII. 630. Tshudish language, XIII. 215.
Tsientang, river, bore in, XVII. 581.
Tso Moriri, lake, XI. 440.
TUAM, Irish town, XXI. 362—castle of, X. Tuaricks, II 219. Tuart, timber-tree, XXI 278. Tub-wheels, XII. 169. Tubellaria, zoophytes, XXI. 982. Tubercles, XVII. 690. Tubergite, mineral, XV. 80.
Tubers of plants, V. 79.
Tubes, quantity of water discharged by, XIL 115 - strength of wrought-iron tubes, XX 178—for thermometers, XXI.
221—stronger than solid rods containing the same quantity of tumber, XX. Tubicenus, genus of insects, IX. 188. Tubicolæ, order of annelides, NY 294.
Tubina, fossil mollusks, XVII. 109, 111.
TUBINGEN, in Wirtemberg, XXI. 362—
Academy of History at, II. 69—univer-

sity, XXI, 492.

Tubular bridges, XII. 607. Tubulariadæ, zoophytes, XXI. 1006. Tubulibranchiata, order of mollusks, XV.

Tubulifloræ, nat. order of plants, V. 197.

TUC-TUR Tuch (Prof), XVII 535 Tucker (Abraham), XXI 362-Dr Paley's opinions of his writings, L 114, n—character of his mind, 386—somewhat resembled Montaigne, 387—works of, - (Josiah), dean of Gloucester, XXI 362-on the Naturalisation Bill, XVIII 259, n 2-on taxation, XXI. 42. Tucker's locks, XIII 540 Tuckey (Captain), his African expedition, II 210; VII. 245 246
Tucuman, XXI. 363, XVII 779
Tudela, Spanish town, XXI 363
Tuesday, I 458, n, VI 75
Tufa, calcureous, XV 92, 143
Tuff, XV 133. Tuilleries, palace of the, XVII 281
Tuke (Sir Biian), first postmaster-general, XVIII 402. Tula, in Russia, XXI 363. Tulip-tree, XVII 761, 627, V 180 Tulips, V. 212-culture of, XI. 751-tulipmania, IV. 440. Tull (Jethro), his system of husbandry, II 259, 260, 373—revived by Mr Smith of Lois Weedon, 293, 308 TULLAMORE, Irish town, XXI. 363; XIII 93 Tulls, town in France, XXI. 868.
Tullia, daughter of Cicero, VI 719.
Tullin (C. Brauman), Danish poet, XIX 693. Tullus Hostilius, XXI 363; XIX. 296. Tumblei lock, XIII 533. Tummel, Scotch liver, XVII. 455 Tumours, XVII. 690—surgical treatment of, XX. 833. Ot, XXI 363—gyle-tun, V 328 Tunaberg copper-mines, XVII. 621. Tunberldge, in Kent, XXI. 363; XIII. 66, or Tonbridge Wells, XXI 363mineral waters of, XV 38 - sandstone, XX. 711 Tundras, XVII. 610; XXI. 298, Tune, in music, XXI. 364—phrenological faculty so named, XVII 568 Tungsten, in chemistry, VI. 494-in mineralogy, XV 66 Tungsten-ochre, XV 112. Tungstic acid, VI 494 Tungus, IX. 345. Tungusians, XIV. 260-language of, XIII. Tunicata, class of mollusks, XV. 330, 322. Tunis, in Barbary, XXI. 364; 11, 233; IV. 431; VI. 288—Blake's attack on, IV 752—weights and measures, XXI. 814.

Tunkin, III. 735. See Tonquin.

TUNNEL, XXI. 365—blasting of, IV. 755— Brindley's, V. 364—construction of, VII. 325—on railways, XVIII. 760— Thames tunnel, XIII. 676. See Thames Tunnel. Tunny, XII. 293; IX. 765-fishery, XX.

(Mr), his application of photography to porcelain, XVII. 551. Tupac Amaru, insurrection of, in Bolivia and Peru, IV. 881.

Tupaia, genus of mammalia, XIV. 151. Tupinoquins, Brazilian tribe, V. 280. Turanian languages, XIII. 217; XVII.

535-classification of, 536. Turanians, IX 344

Turbinated bones of man, III. 23. Turbine wheels, XII. 76, 169, 170, 171; L 889, 890.

Turbinella, genus of mollusks, XV. 289. Turbinidæ, family of mollusks, XV. 382. Turbinolia, fossil corals, XVII. 97. Turbinolidæ, zoophytes, XXI. 1005. Turbo, genus of mollusks, XV. 382—fossil, XVII. 110. Turbot, XII. 271-as food, IX. 764-fishery,

634, 648. Turcomans, III. 751; XXI. 878—of Buk-hara, V. 758.

Turenne, X. 34; IX. 37L Turf, as fuel, X. 318-in France, 251. Turgite, mineral, XV. 109.

#### TUR-TUR

TURGOT (A. R J), XXI 365, X 38meaning attached by, to the word physics, I 9-on M de Gournay, VIII 374, 375 -his account of the death of Queen Margaret, XIX 748; and on her influence over her husband, ib, n 3-on the Corvée system, XXI 43.

Turn, XXI 366, XIX. 640—Royal Academy of, II 63—Academy of Painting at, 68-discovery of part of the Theodosian code at, VI. 744—Prince Eugenc's victory at, IX. 369—treaty of, in 1703 XII 652—papyri in the museum of, XVII. 263, 264—university of, XIX. 639; XXI. 366, library of, XIII 417 Turkestan, XXI 367 See Bukhara.

— CHINESE, XXI 367.

TURKEY, XXI 368, IX 403—army of,
III 656—war with Austria, IV 303—
wai with Britain, in 1806, V 603—war with the Greeks, 651; AI 22 et seq battle of Navanno, 30-war with France, in 1799, VIII 488-mountains of, IX. 383-French trade with, X. 259-Jews m, XII 783-hbranes, XIII. 427-coms, III, All 183—Inflatics, XIII. 227—coning, XV 442, 445 — monatchy, 414—wars with Russia, XIX 476, 482 et seq., V. 538; X. 144; XX 855 et seq.—last war with Russia, XIX 500 et seq.—Charles the Twelfth's retreat to, XX. 854, his singular conduct there, 855—production of silk in, 277—navy, 138—destruction of its fleet at Sinope, 308 - conquest of Syria by Mohammed Aly, 911 — weights and measures, XXI 814—tobacco of, 294-wines, 886-maps of Tur-

key in Europe and Turkey in Asia, XXI Plates. See Turks.

bird, XVI 786, XVII. 633; IX 762 Company, XII 818.

Turkey-blue, dyeing of, VIII 303. Turkey-buzzard, XVI 739
Turkey-oilstone, XI. 614.
Turkey-red, dyeling of, VIII 202, 318
Turks, IX 344—African, II. 218—tubes

of, III 744—their conquest of Algiers, II. 566—allegiance to, thrown off by the Algerines, 569—origin of their hatred towards the Persians, III 862—their conquests in Arabia, 363, 365; and in other parts of Asia, 744—appear to be encamped rather than settled in Europe, IV. 173, n. 2-siege of Athens by, 171 -their baths, 506 - beards, 527 months, VI. 674—carpets, 270—their invasions of the eastern empire, VII. 314 et seg-their first appearance in Europe, 319-Constantinople taken by, 321-invasion and conquest of Egypt by, VIII. 487—character of, 430, n. 4—language, IX. 389; XIII. 216—geometry of, X. 503—thoir inroads on Hungary, XII. 12 et seq —in Greece, XI 14; attempts to throw off their yoke there. 22 et seg.; sympathy felt for these attempts, 27—then attack on Malta, XIV. 114—conquest of Palestine by, XVII. 196—in Syria, XX. 909.

Turmeric, V. 211—dyestuff, VIII. 297. Turna, in Wallachia, XXI 385, VII 653.

TURNAU, in Bohemia, XXI. 385
Turnbull (William), bishiop, founder of
Glasgow College, X. 646; XXI. 476.
TURNEBUS (Adrian), XXI. 385.

Turner (Dr), on gas-burners, X. 425—on the effect of the semosphere of towns on plants, V. 106.

(Sir James), V. 428.

(J. M WILLIAM), landscape painter, XXI. 385.

on romance, XIX. 266, 267. (R.), roof at Liverpool constructed by, XIX. 398.

(SHARON), historian, XXI. 890— his character of Richard I., VIII. 674— on the reign of Edward III., 683.

—— (Sydney), his reformatory at Red Hill, XVIII. 202—on reformatory schools in Scotland, 205.

Turner's account of Bootan, V. 33, 84, Turneracese, nat. order of plants, V. 198. TURNEOUT, town in Belgium, XXL 390.

#### TUR—TWY

TURNING, art of, XXL 390-elliptic, VIII

when first given to sheep in England, II 259—Tull on the culture of, 560—Dawson's culture of, 263, XI 740-culture and varieties of, II 317manures for, 264, 317 (see Guano)thinning of, 318—preserving for sheep, ib—diseases, 319—inorganic matters in. 384-composition of the ash, 387-albuminous matters in, 419-dails, 275cutters, 284-seed, 336-first introduction of, into Norfolk, XVI 289.
Tunnp-fly, IX. 151, II. 319; XL 740;

XXI 549

Tumpike roads See Roads.

weighing machine, XXI. 797. Turnstone, bird, XVI 804

Turn-tables, on railways, XVIII. 769, 777 TURPENTINE, XXI 392, XIX. 87, 88—oil of, XVI 496 - much used in oil-varnishes, XXI 526.

- (valley of), XII 736. Turquois, mineral, XV 74-Persian mines of, XVII 422

Turiet, in architecture, III. 514

- clocks, VII 18 - shells, XV 383

TURRETIN (Francis), theologian, XXL 392

—on theology, 181 et seq Turriff, in Aberdeenshiie, XXI 392 Turrilites, genus of mollusks, XV 394. Turritella, genus of mollusks, XV. 383, XVII, 110, 113

Turritellidæ, family of mollusks, XV. 383 Turtle dove, XVI. 793-its insensibility to pam, III 178.

Turtles, XIX 18; XVII 634—as feed, IX. 763—fossil, XVII. 158. Turtukai, VII. 654

Tuscan order of architecture, III. 451modern Italian, 477

school of painting, XVII. 61
Tuscans, IX. 355 See Etruscans.

TUSCANY, XXI 392-French trade with, National Action of National Acti

TUSCULUM, ancient city of Latium, XXI. 398.

Tusk, fish, XII. 269; IX. 764-fishery, 648 Tusks, III. 38, XVI. 478. See Elephant,

Tussac grass, II. 330; IX 475. Tussah silk-worm, XX, 288, 289, Tusser on agriculture, IL 256. Tutors at Oxford, XXI. 455, 450 TUTTLINGEN, in Wilstenberg, XXI. 398. Tutuila, island, XVIII. 277. Tuxtla, volcano, XIV, 714,

Tur, Spanish town, XXI. 398. Tuzla, salt lake in Asia Minor, III. 758. TVER, in Russia, XXI 398; XIX. 521.

TWEED, XXI. 398. XX. 41—source of, XVII. 360—valley of, XIX. 790—produce of, in salmon, grilse, and trout, IX. 606-iental of the fisheries, ib.fisheries on, 607-close time, 613. TWEEDDALE, XXI. 899; XVII. 860.

— (Marquess of), his steam-plough-ing, II. 367—brick-making machine, V. 346—his tile-making machine, VIII. 133.

TWEEDMOUTH, XXI. 309 Tweeds, kind of cloth, XXI. 906, 918. TWENTY-BOUR PERGUNNAUS, in India, XXI. 399.

Twesten on logic, XIII. 592 n., 597 n., 628.

Twice (William), his treatise on hunting, XIL 84.

TWICKLNHAM, in Middlesex, XXI. 399. Twilight, IV. 10, 179-how to find the length of, 113.

Twilled, or figure-weaving, XXI. 785. Twinkling of the stars, IV. 10. Twins, weight of, III. 2.

(The) constellation, X. 447; IV. 80. Twiss (Horace), XXI. 399. Twisting, strain produced by, XX. 755,

777. Twyte, bird, XVI. 761.

#### TYA-TYT

Tyas (Sir Franco), XIII 113 Tycho Bialie See Bialie (Tycho). Tychson (O Gerhard), orientalist, XXI 399 Tyler (Wat), insurrection of, VIII 684. Tylode, genus of insects, IX 140 Tylostoma, fossil mollusks, XVII 111 Tympans and tympan sheet, in printing, XVIII. 546

Tympanum of the ear, III 46, XVII. 679-comparative anatomy of, III 98 - m architecture, III 514

water-laising wheel, XII. 183
Tyndal (Prof), on the motion of glaciers, XV 139, n.

TYNDALE, or Tindale (William), XXI 399 —his translation of the Bible, IV 702.
Tyndall (Dr), on diamagnetism, XIV 30, 31.

TYNE, English river, XXI 400; XVI. 166, 299-Improvement Act, XVI 168 - coal measures of the district of,

XV. 203 - Scotch river, XI 177

TYNEMOUTH, XXI. 400; XX. 115 Type-founding, XXI 400—Caslon's improvements in, VI. 310; Baskeiville's, IV 486; XVIII 539. See Types

Types for punting, first printing with moveable, XVIII 524—invention of casting, 528—character of those first used by the early printers, 529-Caxton's, 536-first introduction of Roman, IV. 708 - specimen of the different kınds, XXI 403.

- organic, in chemistry, VI 504. - in numismatics, XVI 353 Typhacex, nat. order of plants, V. 214 Typhus, fossil mollusks, XVII 110 Typhlops, genus of serpents, XIX. 41. Typhon, Egyptian deity, VIII. 438—Bryant on, VII. 714

Typhoon, XVII. 616—in the Philippine islands, 512 See Cyclone. Typhus fever, IX. 526

Typography, IV 707 - early, 624 See

Printing Tyrannio, III 536. Tyrannus, genus of birds, XVI 749. Tyrant, thirty tyrants of Athens, IV. 208 -the thirty Roman, XIX 349. See Despot.

Tyrconnel (Lord), V. 441 TYRE, XXI 400, X. 168, XVII. 182; XX. 269, 901 et seq.—era of, VI. 672—commerce of, VII. 185—dye of, VIII 272—besieged by Saladin, 481—destroyed by Alexander, XIII. 767—coins of, XVI. 379—navigation of, 1. Tyre of wheels, XVIII. 752.

Tyrnoot, XXI. 406. See Tirhoot. Tyric (David), execution of, for treason,

Tyrinthus, near Mycenæ, cyclopean struc-tures at, III 440 Tyrite, mineral, XV. 110.

TYROL, XXI. 406; IV. 311, 309-beights of its mountains, XVII 642, 643.

Typone, Irish county, XXI. 406—tural statistics of, XII 516, 517. - (Earl of), his rebellions in Ireland,

XII. 470, 478. Tyropeeon, valley of, XII. 7:16 Tyro's shorthand writing, XX. 675. Tyrrel (Walter), VIII. 669.

Tyrrell (Mr), his work on Cumberland's Law of Nature, VII. 579 Tyrrhenian coast of Italy, XX. 240. Tyrrzeus, Greek poet, XXI. 409.

TYRWEITT (Thornas), XXI. 400-his edition of the Canterbury Tales, VI. 488. Tyson (Edward), his researches in comparative anatomy, IL 763.
TYTLER (William), XXL 410.

- (Alexander Fraser), Lord Woodhouselee, XXI. 410—on Ramsay's Monk and the Miller's Wife, VIII. 250—on Dr

(PATRICK FRASER), XXL 412; XI. 548—his Life of the Admirable Crichton, VII. 497 et seq.—on Sir Thomas Craig's work on the Union, 478—on the supposed escape of Richard II. to Scotland, VIII. 680, n.

### TZA-UMB

Tzana, lake. See Dembea. Tzetzes (Joannes), Greek grammarıan, XXI 415 - his tale about Belisarius. IV 627 — on the buning-glasses of Archimedes, VI. 4

## U

U, letter of the alphabet, XXI 416-in abbieviations, II 20. Ubaldi (Guido), X. 375on mechanics, I

590-sector supposed to have been invented by, XX. 30

UBEDA, town in Spain, XXI 416. UBIQUITARIANS, XXI. 416

Ucelli on ornithology, XVI. 728 Udal lands, IX 522, n 4—in Norway, XVI 326

UDALL (Nicholas), XXI 416-his comedy, 166.

Udder, inflammation of, XXI. 571. UDINE, in Austrian Italy, XXI 416 Uenephès, Egyptian king, VIII 454 UFA, in European Russia, XXI, 416 Uglireit, in Russia, XXI, 416, XVII 24 Uglians, IX. 345, 388—language, 389;

XIII. 215. Uhland (Ludwig), German poet, XVIII

UIST (South and North), XXI. 416; XI. 278.

UKRAINE, XXI. 417.

Uksur (el). See Luxor, temple of.
Uladuslas, kings of Poland so named,
XVIII 139 et seq.
Ulama, in Turkey, XXI. 381.

Ulceration, XVII. 690

Ulcers, surgical treatment of, XX. 827. ULDABORG, in Finland, XXI. 417; IX. 584,

585 Ulcoiota, genus of insects, IX. 143. Ulidea, genus of insects, IX. 253. Ullage of a cask, XIV. 521 Ullmannite, mmeral, XV 116.

Ullnage, or measuring of cloth, XXL 916 Ulioa (Don Antonio de), his secret report to the Spanish government, IV 830on the Peruvian Indians, rb., 831—his measurement of an arc of meridian, IX.

Ullswater, English lake, VII 577—trout of, III 157, n
Ulm, XXI 417—battle of, V. 599—surren-

der of, to the French, X. 138.

Ulmacee, nat order of plants, V. 206. Ulma, in man, III 32—in the mammalia, 81; blids, 86; reptiles, 88.

Uloborus, genus of arachnides, III. 381. Ulocorus, genus of insects, IX. 138.

Ulphilas, Gothic alphabet of, II. 615— Gothic Bible of, IV. 701; X. 729; XIII. 211, XX. 840—his version of the Gospels, and Epistle to the Romans, XVII. 200-Lord's Prayer, as translated by, X. 720.

Ulpian Library, at Rome, XIII. 385. ULFIANUS (Domitius), jurist, XXI. 417— on Insurance, XII. 394. Ulrica Eleonora, XX. 857.

ULSTER, Irish province, XXI. 417-colonisation of, by English and Scotch settlers, V. 386; XII 479 — massacre of the English in, V. 399—Remonstrant synod of, XII. 532-linen manufacture, XIV.

Ulster's office of arms, XI. 321. Ultima Thule, X. 462. Ultramarine, a colour, VIII. 175

Ulugh-Beigh, astronomy cultivated by, III. 795—his catalogue of stars, IV. 80. Ulula, genus of birds, XVI. 746.

ULVERSTONE, in Lancashire, XXI. 417. ULYSSES, XXI. 417; XII. 452-character of, XVIII. 101.

Umbel and umbellules, in botany, V. 114. Umbelliferous plants, V. 135—region of, 227; XVII. 027—poisonous species, XIV. 438.

Umbilical cord, III. 72. - arteries and veins, III 72. Umbo, in bivalve shells, XV. 341.

#### UMB-UNI

Umbra, in astronomy, IV 45. Umbrella, genus of mollusks, XV. 372 Umbrina, genus of fishes, XII. 285. UMMERAPOORA, in Burmah, XXL 418; IV. 322. Umzımkulu, river, XIII. 32.

Unalashka, island, II. 465. Unau, in zoology, XIV. 190-its stomach,

III. 108—intestines, 110 Uncites, fossil mollusks, XVII. 103, 104 Unction, in baptism, IV 424—extreme unction, IX. 458; XVIII 336—one of the corruptions of Christianity, L 520 Undercliff, Isle of Wight, XXL 862. Undershot water-wheels, XII. 163 Understanding, Aristotle on, III. 549-Kant's categories of the, XIII 47. Undertakers, Irish party, XII. 495. Underwriters, XIII. 530, XII 419—their hability in case of collision, VII 181—

limitation of their hability, XIL 422 Undina, genus of fossil fishes, XII. 336 Undulation, of waves, XII. 162—of air, XVIII 68 et seq See Acoustics, Waves.

Undulatory theory of light, VI. 662; XIII, 450. UNGHVAR, town in Hungary, XXI. 418 Unguents, for resisting fraction in machi-

nery, XIV, 405, 408, Unguiculata, IL 774 Ungulata, IL 774.

Ungulma, genus of mollusks, XV. 350. Ungurutus, in Bornou, Richardson's death

Unicorn, in heraldry, XI. 334, 335. —— sea, XIV. 229 Unigenitus, bull so called, X, 35. Unio, genus of mollusks, XV. 349, 347fry of U littoralis, 354.

Union, XXI. 418. Canal, XIX. 808--viaduct over, at Falkuk, XVIII. 763

- Islands, XVIII. 278. (The), of Britain and Ireland, XXI. 418; XII. 500-proposal for, V. 566effected, 572-agitation for repeal of,

(The), of England and Scotland, XXI 418; V. 381, 449; VIII. 393; XVII. 291—attempts to dissolve it, V 452-Defoe's mission to Edinburgh respecting it, VII. 696. Unionidæ, family of fossil mollusks, XVII

Unions for administering the poor-laws,

Unions for administering in PVIII. 719; XVIII. 714.
UNITARIANS, XXI. 418, XII 764; XVIII 489—their places of worship in England and Wales, VIII. 745; in Scotland,

United Brethren. See Moravians. Presbyterian Church, XVIII. 496, 500—proportion of adherents in Scot-

land, XIX. 801. STATES of North America, XXI. 419; IL 706—literature of, L 203 and -American Academy of Sciences II. 66-agriculture and population, 707 —climate, 674—Indian population, 677, 693—natural bridge in Virginia, III. 130—army, 661—voting by ballot, IV. 400—barrows, 478—war of independence, V. 469, 476 et seg.; XXI. 749 et seg.—war with Britain in 1812, V 615 -bad effects of the mercantile policy of Britain towards, 617—bookselling in, 31, 32—Chalmers' Political Annals of, VI. 402 — treaty with the Chinese, 597—coal in, VII. 126, 127—commerce, 190 et seq.—conduct of, in regard to international copyright, 360—law of copyright, 359—corn-trade, 404—cotton manufacture in, 458—growth and con-sumption of cotton in, 455; dependence of Britain on, for supplies of, XIV 291 reprinting of British books in, VII 360—designs on Cuba, 568, 569—docks of, VIII. 75—emigration to, 652; XVIII. 339 —hardware manufacture, VIII. 728—exports and imports, IX. 436—federal government of, 498—conduct of France

towards, X. 38—rate of interest in, XII

## UNI-URA

432; XXI 75-Jews, XII. 782-recent intercomise with Japan, 698-libraries, XIII 428—schools of medicine in, XIV 464, XXI 493—proportion of insane, XIV 536—nostalities with Mexico, 713—coms of, XV 442, 445—population, 605, 608; XVIII 339—gold legion of, XV metallic produce of, 248—education n, 820 — banking, 491 — newspapers, XVI, 192, 195—binds of, 783 et seq— paper-making, XVII 260—height of mountains, 645—limited hability in, 322 -post-office, XVIII. 418; statistics of, compared with those of Britain. 420. packet service, 427; ocean mail service. 426-substitution of gold for silver currency, 474-reformed churches, 492early printing, 533—locomotive engines, -railway statistics, 787-prison discipline, 571—penitentiaries, 572, 586—savings-banks, XIX 671—locomotive steam-engine used in, XX 615-navy, 138—maple-sugar, 798—Story on the constitution of, 737—experiments on steam, 558-introduction of steam-navigation by Fulton, 638—imports of tea into, XXI. 91; VI. 591—Tocqueville on, XXI. 299—colleges, 493—theological schools, 494—weights and measures, 814 -Wilson on the ornithology of, 873wines, 888—trade with Buenos Ayres, V 726; Chile, VI 551, China, 591; Britain, VII 190, VIII 732, 733; France, X. 260, Holland, XI. 581-Maps, XXL Plates

Unities of the drama, observance of, by the French, VIII. 149, 156—their merit considered, 149-frequently disregarded by Shakspeare, 153; and by later dramatists, 163

Unity of God, XXI 192—ancient mysteries supposed to teach the doctrine of, XV. 754

of the Church, XVIII. 484. of the Gospel Dispensation, I. 486—how to be understood, 487—what it consists in, 488.

Univalve shells, XV. 365, 366 et seg.—fossil, XVII. 108 et seg Universality of the Gospel Dispensation,

T. 484

Universals, m Aristotelian philosophy, III. 548, 539

Universe, cause of, according to Plato. XVII 803—opmions of the Druds respecting the, VIII. 185.
UNIVERSITIES, XXI. 443—chancellor of,

VI. 412 - foundation of, XIV. 458; XVII 521. See the different kingdoms and cities, particularly Paris, Oxford, Cambridge, Edinburgh, Glasgow, &c. University College, London, XXI. 470. Unkiar-Skelessi, treaty of, XIX. 498.

UNST, Shetland Island, XXL 494; XX. 113. UNTERWALDEN, XXI. 494; XX. 882. Unzer on the nerves, XVII. 676, 677. Upas tree, its poisonous principle, III. 270

-in Ceylon, VI. 394. Upeneus, genus of fishes, XII. 279. Upis, genus of insects, 1X, 130. Upolu, island, XVIII. 277.

UPSAL, or Upsala, in Sweden, XXI 495-university, 492—library of, XIII 427. UPTON-UPON-SEVERN, XXI 495.

Upupa, genus of birds, XVI, 771. Ural Mountains, XXI, 495; III, 784; IX, 382; XVII, 597; XIX, 514—height of, XVII 644-gold mines of, XV. 280, 231-silver and platina mines, 236. - river, XIX, 515

Uralite, mineral, XV. 81. Uralorthite, mineral, XV. 90. URALSK. in Russia, XXI. 495. Uran mica, XV. 104.

- vitriol, XV. 98. Uranea, lake, deposit of infusoria at, XVII. 94.

Urania, a muse, XV. 609 - genus of msects, IX. 209, Uranite, XV. 104 Uranium, VI. 496; XV 66—its discovery

by Klaproth, XIII. 106. Uranium-ochre, XV. 112.

#### URA-URU

Uranoscopidæ, family of fishes, XII. 272 Uranoscopus, genus of fishes, XII. 219,

Unanotantalite, XV. 109.

Uranus, planet, IV 72, 93-discovery of, I 840, III. 807—satellites, L 840, 860 IV 75, 93-perturbations of, I. 828; IV. 107-principal inequality, I 832-Delambre on the motions of, VII 702 - Robison on its orbit and motions. XIX. 239 See Adams, Levermer. - (Nicephorus), VII. 313.

U1ao, mineral, XV 98 Ulaptera, genus of fishes, XII. 327 URATUPE, town in Bokhala, XXI. 495. Urate, IL 407

URDINO, in the Papal States, XXI. 495university of, 492-legation of, XVII

URE (Dr Andrew), chemist, XXI 495—his analysis of barley, V. 324—his experiments on sugar as a substitute for malt in brewing, 336—on Bavarian beer, 335, 336—his detonating eudicmeter, VIII. 625—on Iron, XII. 538—on caoutchouc, VI. 203—on soap-making, XX 366—his experiments on steam, 557, 558—his galvanic experiments on a dead body, XXI. 634 the fineness of wool, 905

river, XXL 957 Urea, VI 511; XVII. 666. Uletels, III, 68.

Urethra, III 68, 70-erecile tissue of, II. 799-surgical treatment of stricture of, XX. 831.

Ulfah, town in Turkey, XVI. 708 Unré (Honoré d'), XXI. 495; XIX 269. URI, Swiss canton, XXI. 495; XX. 882 lake of, 889.

Uris, genus of birds, XVI 810 Uric acid, VL 523; XVII. 666, 667. Urim and Thummim, XVI 699 Urinals, at railway stations, XVIII. 770 Urinary organs of man, III. 68—in brutes. -concretions, XVII. 691-diseases of, in the domestic animals, XXI, 570

See Calculus, Lithotomy Urine, IL 782; III 68, VI. 523; XVII. 666—use of, in agriculture, II. 402—sulphated, 407—detergent property of, IV. 769, n.—coloured rings produced in, by voltaic electricity, XXI 633. Urmia. See Urumiyah.

Urnatelles, zoophytes, XXI. 1002 Urocerata, family of insects, IX. 184. Uroconger, genus of fishes, XII. 232 Urolophus, genus of fishes, XII 325, 328. Uromastyx, genus of roptiles, XIX 31. Uronemus, genus of fossil fishes, XII 337; XVII. 125.

Uropoda, genus of arachnides, III. 388. Uropterygius, genus of fishes, XII 232. Urosphon, genus of fossil fishes, XII 344. Urquhart (Sir Thomas), his account of the Admirable Crichton, VII 498, 500—said

to have died in a paroxysm of laughter.

VIII. 192, n. 1. Urquiza (General), XVII 781. Urrey (General), defeat of, V. 406. Ursa, constellations, IV. 79. Ursicinus, VII. 807. URSINUS (Fulvius), XXI. 496.

- (Benjamin), on logarithms, XIII. 553.

- (Zacharias), German divine, XXI. 496. Ursula, VII. 307.

- town in the Azores, IV. 386. Ursus, genus of mammalia, XIV. 153dentition of, XVL 462. Urticacem, nat. order of plants, V. 206. URUGUAY, South American state, XXL

- river, XXL 497; XVII 603, 782. URUMIYAR, town in Persia, XXL 497; XVII. 421.

- Persian lake, XVII. 421. Urus, genus of maramalia, XIV. 214;

#### URV-VAG

Urville (Captain Dumont d'), his antaictic expedition, X. 475 Usbecks, III 751; IV. 396-of Bukhara.

V. 758. Ushak, carpets of, XXI 384.

USHANT, Island, XXI 497.

USHER (James), archbishop, XXI, 497date assigned by, to the Creation, VI. 669—his MSS in Trinity College, Dubhn, XIII 404-assisted Walton in publishing the Polyglott Bible, XXL 695 - (M1), his steam-cultivator, IL 367.

Usia, genus of insects, IX. 234. Usk, Welsh river, V 312—vale of, ib. Uskur, in Turkey, XXI. 497

Ustailz on the duties on provisions in Spain, XXI 72

Usteropotmi, VII. 761. Ustica, island, XX. 246.

Usring, town in Russia, XXI. 498

Usury, XXI. 498-argument of Calvin respecting, I 233, XII 427, n 2—Bentham on, I 398.

Usury-laws, XII 427--committee of 1818 on, 430—repeal of, ib.; benefits from that measure, VII. 199.

UTAII, XXI 498; XVII 594—Mormon settlement at, XV. 592—language of, XIII. 222 See Salt Lake

Utero-gestation, limits of, XIV, 426. See Gestation, Pregnancy Uterus, III. 71-Dr Hunter on the ana-

tomy of, XII 27, 31 UTICA, an ancient city of Africa, XXI.

498-taken by the Romans, VI. 300 - a town of the United States, XXI.

Utilitarian theory of morals, XV. 551, 553 Utility, the principle of, proclaimed by Bentham, I. 395; fully discussed by Hume, 445—considered in relation to morals, 398, 417; IX. 273.

UTRRORT, XXI. 499—university of, 492; XI. 590—library of, XIII. 422—political movements at, in 1784, V. 525.

— (Peace of), V 452—provisions of, in reference to Spain, XX 741
UTRERA, town of Spain, XXI 499. UTTOXETER, in Staiford, XXI 499. Uvea in various animals, III 97. Uvula, III. 48.

Uwarowite, mineral, XV. 85. Unbridge, in Middlesex, XXI 499. Uxmal, runs at. II. 697. Uz, a region and tribe mentioned in the

Bible, XXI. 499. Uzbecks, people of Bukhara, V. 758. Uzbs, a town of France, XXI 499. Uzziel (Jonathan Ben), his targum, XIX.

# $\mathbf{v}$

V, letter of the alphabet, XXL 500-in abbreviations, II. 20. Vacarrus, XXI. 452.

VACCINATION, XXI. 500-Jenner's discovery of, and researches into, XII. 720, -attempts to introduce it into Persia, XVI. 430—Extension Act, XX. 606. Vacciniaceæ, nat. order of plants, V. 198. Vacomagi, Caledonian tribe, VI. 74.

Vacuum, ancient opinions regarding, IV. 448, 449; VII. 726—passage of electri-cal spark through, VIII. 545—nature's supposed abhorrence of, XVIII. 24-rush of air into, 58-in the steamengine, XX. 619-apparatus in some animals for producing a vacuum, III.

- gauge, XX. 589. - valves, XX. 589.

VAGA (Perino del), a Florentine painter, XXL 503.

Vagh Ujhely, town in Hungary, XVI. 155.

Vagina, III. 71. Vaginella, fossil mollusks, XVII. 110, 111 Vaginulus, genus of mollusks, XV. 874. Vagrancy, restraint of, XVIII. 299-diminution of, 801.

## VAI—VAL

VAILLANT (Jean Foy), French numismatast, XXI 503

Vair, in heraldry, XI. 325. Vaisyas, a Hindu caste, VI 318; XI. 471. Vaitapu Islands, XVIII 278

Val (Camille J du), his works on insects, IX. 24

VALAIS, Swiss canton, XXI 504; XX. 882 Valbonais (Bourcheme de), IV 779 VALCKENAER (Ludwig Kaspei), XXI. 505 - (JAN), XXI 505

VALDAI, XXI. 505-mountains, XIX 514 Valdemar II and III of Denmark, VII

VALDENSES, or Waldenses, XXI 505; II. 446 VALDEPENAS, town in Spain, XXI 510.

Valdez (General), IV 833

VALDIVIA, in Chili, XXI. 510, 547; VI. 547 VALDO or Waldo (Peter), Lyonese re-

former, XXI 510 VALENCE, in France, XXI 512

VALENCIA. Spanish province, XXI 512: XX. 493-sılk, 278

- town, XXI 513-university, 492. - town of Venezuela, XXI. 518 VALENCIENNES, French town, XXI 513lace, XIII. 149-siege of, in 1793; X

79 - (M.), assist's Cuvier in a work on fishes VII. 605-on fishes, XII 235 et

Valens, Roman emperor, VII 309
VALENTIA, XXI. 513—island, XIII. 73 longitude of, 687.

Valentine, Andrea, a Rosicruscian, XV 757.

(Basil), on sal-ammoniac, II. 720 -on brewing, V. 318

Valentini on medical junsprudence, XIV. 423.

Valentanian, Roman emperor, VII. 309 Valentinians, a Gnostic sect, XXI, 513. Valentinite, XV, 112

Valenthius, founder of Gnostic sect, X 688. Valerian, reign of, XIX. 348; V 196.

Greek, V. 200

order of plants, V. 196.

Valerianaceæ, nat. order of plants, V.

196. Valerianus Magnus, discovery in pneu-

matics claimed by, XVIII. 25. Valerius Corvus, XIX. 303.

- FLACOUS, XXI, 513. See Flacous. (Lucas), X 504.

Maximus, his account of an enormous serpent, XIX, 63. - (Poplicola), XIX. 298.

Valory on libraries, XIII. 415, 416 et seq. Valesco de Taranto, surgeon, XX. 817. Valesiana, II. 738.

Valesius Henricus. Sec Valois, Henri de. VALETTA, XXI. 513; XIV. 115, 116. Valette, La. XIV. 114.

Valin (Mons.), on collisions at sea, VII. 131.

VALLA (Lorenzo), or Laurentius, Latin scholar, XXI, 513. Vallack (M.), his binocular telescope, XXL

134

VALLADOLID DE MECHOACAN, XXI. 514. See Mexico. -, in Spain, XXI. 514-university of,

402 Vallancy (General), on Irish cromlechs,

Vallée (General), II. 575.

Valley, great central valley of Syria, XX. 902—relation of valleys to rivers, XIX.

Vallisneria, plant, V. 69. Vallisnieri (Antonio), his works on insects, IX. 3.

Vallombrosa, mountains of, XXL 892 VALLS, Spanish town, XXI. 514.

Valmy, battle of, XIII. 59. Valors (Henri de), great French scholar, XXT. 514.

Valonia, Valionea, or Valona, IV. 880; XI. 16—its use in tanning, XIII. 306. Valparaiso, in Chili, VI. 542, 546, 547; XXL 547.

### VAL-VAR

Valsalva, anatomist, II, 764. Value of commodities, XVIII. 210—by what regulated, 247—no fall in value of the precious metals, 477; but would be advantageous, 475—taxes estimated by value, XXI 38

Valve of steam-engines (cylinder), XX 581, valve-gear, 582 et seq; expansion valves, 585, 654; slide-valves, 596, 654 (see Slide-Valves) - stop-valve, 589throttle-valve, ib., 599-valve-chest in steam-engines, 589, XXI 519. Valz, his micrometer, XIV 758.

Vampire, XIV. 148.

Vampire-bat, XVII 632, XVI 452 Van, town of Asiatic Turkey, XXI 514 - Diemen, Dutch governor of India,

X 474 - DIEMEN'S LAND, XXI 520 See Tasmania.

- Dyck (Sir Anthony), painter, XXI. 520; III 711; XVII 56, 70, 75 - Effen, Dutch author, XI, 591

Haien, (William and Onno), Dutch authors, XI 591.

— Marum, his electrical machine, VIII. 538—on the fusion of wires by electricity, 592-on the chemical agency of electricity, 595, its magnetic effects, 600; its influence on the pulse and on perspiration, 602, 603-on the electricity of melted bodies, 565 - the effect of electricity on eels, 602-his electrifying machine, 604.

Vanadmite, mineral, XV. 106. Vanadium, VI. 494; XV. 66.

VANBRUGH (Sir John), architect and dra-matist, XXI 515-his style of architecture, III 455 - his dramatic works, VIII 162; XXL 173 VANCOUVER ISLAND, XXI. 519, XVII. 39

- clunate of, 612 - gold-deposits in, XVIII. 464.

Vandals, X 577-monarchy of, XV. 414their irruption into Spain, XX. 459-Rome occupied by, XIX. 363.

Vandellia, a genus of fishes, XIL 253. Vander Hoeven, his work on insects, IX.

Vander Vynckt, XI. 563. Vandermonde, on equations, IX. 308, 314 Vanderlint (Jacob), on political economy,

XVIII. 219. Vandevelde (Captain), on fortresses as a means of defence, XXI. 701—on the

battle of Montebello, 712. VANDERVELDE (William) the younger, ma

rine painter, XXI. 520, 387, 388, 389. · VANE (Sir Henry), XXI. 522; V. 404, 416 -his mission to Scotland, 404. Vanceya, XI 92.

Vanellus, genus of birds, XVI. 797 Vanessa, XX. 874. See Vanhomrigh.

- genus of insects, XI. 207. Vanga, genus of birds, XVI. 748. Vanhomrigh (Miss Esther), IV. 664; XX.

874. Vanilla, V. 211-its culture in Mexico, XIV. 717-in Guatemala, XI. 76.

Vanity, monomania of, XIV 532 VANLOO (John Baptist and Charles Andrew). Flemish painters, XXI, 522.

VANMANDER (Charles), XXI. 552. Vannes, French town, XXI 522. Vansittart (Mr), his financial operations,

V. 685 - his alteration of the sinking fund, X. 330, 331, 332.

VANVITELLI (Louis), architect, XXI 522. Vaporization, XI 270.

Vapour, XL 270; XX. 563-in the atmosphere, IV. 182—latent heat of, I. 926— Dalton's researches on, 934—acts as a moving power in the atmosphere, XIV. 646-precipitation of, 652distribution of aqueous vapour in atmosphere, 657vapour-tension, 675-air and vapour not uniformly mixed, XVIII, 40-vapourbath, IV. 507. See Dew, Evaporation, Steam

VAR, in France, XXI. 522. Varages or Varangians, XIX. 469. Varanes, kings of Persia, XVII. 485, Varanida, serpents, teeth of, XVI. 483.

#### VAR-VAU

Valanus, reptile, XIX. 28 VARENIUS (Bernhald), first physical geographer, XXI 523. Variable stars, I 862.

VARIATION, in music, XXI 523. - of the compass, XXI 523

of the magnetic needle, XIV. 2, 49; I 990 (see Needle), changes in it, XIV 51; annual, 52; diurnal, 53causes of, 54-variation-charts, 49pass, 80-transit, 81

- of parameters, I 810. VARIATIONS (calculus of), XXI 523 See

Calculus. Varieties of animals, what, III 174-piolific union among, 182-in plants, V. 175

Varignon (M), I. 609, 651-his defence of the new calculus, IX. 676—on hydraulics, XIX 184, 185.

Variscite, mineral, XV. 74.

Vailey (Cornelius), on aquatinta engravmg, VIII 802

(C. F), on electric telegraph, XXI. 108, 111.

VARNA, a scaport town of European Turkey, XXL 523-port of, IV. 742-French and British troops at, XIX 502

Varnitagen von Ense (K. A. L. P.), XXI 524.

- Rahel, XXI 524. VARNISH. XXI. 526 — Copal, VII. 348— Florence, VIII. 812—for lithographic printers' ink, XIII 518—use of, in etching, VIII 811, 812-for papier maché,

XVII 261-varnishes on leather, XIII. 310. Varolius (Constantius), or Varoli (Constantio) of Bologna, anatomical discoveries of, II. 759.

VARRO ATACINUS (P. T), XXI. 529.

- (MARCUS TERENTIUS), XXI. 527. Varus (Quintilius), X. 575—his disaster in Germany, XIX. 833

Varvacite, mineral, XV. 111.

Vasa (Gustavus). See Gustavus. Vasanı (Giorgio), XXI 529—his opinion of Mermii, XIV. 491—of Sebastiano, XX. 29; XVII 67, 68-on painting, 49 et sea.

Vasco (Gran), Portuguese painter, XVIII. 899.

Vascular system of the human body. II 806.

tissue of plants, V. 65, 69. system of leaves, V. 88.

Vase, Etruscan, IX. 359; XVII. 48-Greek, XVIII 431. Vasilii (Ivanovitch), XIX. 473. VASSAL XXI 529. Vasto (II), town of Naples, XXI. 529.

Vat, immense size of, V. 331. Vater (Abraham), on nervous papilles, II.

816. - (Johann Severin), XXI. 529-American languages, II. 680 - on the

Pentateuch, XVIII. 401, 402. Vatican, XIX. 369, 367—library, 410— Mai, librarian of, XII. 96. Vaticanus, circus, VI 734.

—— Codex, XIX. 838.

VATTEL (Emmerich de), XXI. 529—on the balance of power, IV. 387, 388.

Vattemare (Alexander), on international exchanges of works, XIII, 375.

VAUBAN (S. le P. de), XXI. 580—on forti-fication, IX. 815—his first system, 817 -his second and third systems, 820on sleges, 822

VAUGANSON (Jacques), XXI. 580-his automatic fluteplayer, IIL 137—his artificial duck, IV. 320—museum formed by. XXI, 822

VAUCLUSS, in France, XXI 580—fountain of, VI 768; XVII 496. VAUD, Swiss canton, XXI 530; XX 882 —population of, XV 602

VAUDOIS, XXL 581.

Vaughan's blowing machine, IV. 797. VAULT, XXI. 581; III. 514. Vaults, spherical, XX. 780-arched, which

#### VAU—VEL

scending vaults, 732-mediæval, 734fan-vaulting, 735.

Vauquelin's analysis of cerebral matter, II 817—of the yolk of wool, XXI. 905. Vauquelinite, XV 106

Vauxhall Budge, XII 583; XIII, 676. Veal, XI 762.

Veaumorel (M Caullet de), his work on Mesmerism, XX 419. Vecchia (Citta), in Malta, XIV 116

Vecht, river, XI. 211 Vedanta philosophy, XVII. 280. VEDAS, XXI 531; XI. 468.

VEGA CARPIO (Lope Felix de), XXI 581; VI 71—his plays, VIII. 146—novels, XIX 286

- mathematical talents of, I. 700-his murder, ib., n 2

Vegetable poisons, XIV. 436—(see Poisons)
—vegetable oils, XVI. 494 (see Oils) vegetable productions of Europe, IX. 385, 386

Vegetables, electricity produced by, VIIL 570 — effects of electricity on, 603—monstrosities, XV 504—worship of, in Egypt, 765—Ingenhousz's experiments on, XII 380—their influence on the animal creation, ib -action of poisons on, XVIII 134 Sec Botany, Plants, Timber, Trees, &c.

Vegetation, a chemical process, VI. 523 - physiognomy of, in different parts of the globe, V. 223-statistics of, 224 -zones of, ib., 226; zones of maime, 229-of the polar regions, XVIII. 178

VECETIUS-RENATUS (Flavius), XXI. 532
—on the Roman armies, III. 629, 623,

(Publius), XXI 532.
VEGLIA, island, XXI 532.
VEHMIC, or Fehmic Courts, of Germany, XXI 532.

Ven, an ancient Etrurian city, XXI. 532. Veins in anatomy, II 792; III. 65; XVII. their valves, II. 794-origin and termination of, ib .- calibre and area, 795-mutual communications, 796, 795 -generally accompany arteries in their course, 795, but not always, ib - are they more superficial and less sheltered than arteries? 796-surgical treatment of dilatation of the, XX. 829.

- mineral, XV. 177, 219, 220, 221granite, 186 - trap, 189-contents of, 192-of lava, 191-system of, 220-their affinities for particular rocks, 221-gold. veins become attenuated downwards, 231 — lead veins, 244 — metals almost always found in, XVII. 621—Werner on the formation of, XXL 884.

VELASQUEZ (D. R. de S. y), Spanish painter, XXI. 533; III. 712; XVIII. 75—compared with Murillo, XV. 694.

Velellidæ, zoophytes, XXI. 1001. VELEZ BLANCO, XXI. 584. (MALAGA), XXI. 584. - (Rubio), XXI. 534.

Velia, genus of insects, IX. 164. Velifer, genus of fishes, XIL 288. Velicius, Paterculus, XXI, 243, 244. VELLETRI, Italian city, XXI 534-lega-

tion of, XVII. 243 VELLORE, Hindu town, XXI. 534.

VELLUM, XXI. 534—early printing on, XVIII. 530. See Parchment. Velocipedes, XVIII. 754. Velocity, VIII. 344-principle of virtual

and actual, I. 651—scale of, VIII. 352—of electricity, 543—of discharged bullets, XI. 115 et seq.—of running water, 141, 142; XIX. 188—of machinery, XIV. 404—of air, XVIII. 58, 59—rivers, XIX. 182, 201; XVII. 601—of ships, XX. 6, 7-of light, XIII. 450; XVI. 552 -of wind, XIV. 651-law of virtual velocities, XX. 548-relation of power to, in steam vessels, 663.

Velschius (G. IL), his intended edition of Edrisi's Geography, VIII. 412.

Veltheim (Count), on cross-breeds of horses, XI. 635.

VELVET, XXI. 584-black, VIII. 806. -method of dveing it intersect each other, or groins, 781-de-

## VEL-VER

Velvet cotton, manufacture of, in France, X. 252.

Vena contracta, XII 103, 104 Venables (Col. R), on pike-fishing, III. 159-on angling, 163

Venaissin, French province, X. 277 Venation of leaves, V. 88

Vendace, fish, XII. 243—in Dumfries-shire, VIII. 238

VENDÉE, XXI. 534-war in, X. 81; XXI. 700

Vendetta, XII, 449.

VENDOME, in France, XXI, 53.7

Venecontes, Caledonian tribe, VI 74. VENEERING, XXI 535—in making encaustic tiles, XVIII. 441—veneer-saws, XIX. 677

Venema, on imputed sin, XXI. 205

Veneration, XVII. 562.
Veneral disease, introduction into Eu10pe, XX. 817—early writers on, 1b., 7a.
3—treatment of, 834

Veneridæ, family of mollusks, XV 350. Venerupis, genus of mollusks, XV 350-fossil, XVII 108.

See Blood-letting Venesection, XX 830 Venetus (Paulus), XIV. 2

VENEZUELA, in South America, XXI 535 -height of mountains in, XVII 645.

VENICE, XXI. 537; XII. 651-Cosmograplucal Academy at, II. 62—war with the Algerines, 570—whether the parent of Gothic architecture, III 446, 447church of St Mark, 448—school of painting, 710—siege of Athens, IV 173—government of, XIII 644, 645—commerce, causes of its increase, VII 186—glass manufacture, X. 659—libiaries, XIII 416-lise of newspapers m, XVI. XIII 416—ise of newspapers in, XVI.
202—Bank of, XV 488—early printing
at, XVIII 522, 532—her power advanced by the Crusades, VII 530—rivalry with Genoa, X 454—early naviguinon of, XVI 2—shipping, 1180 of,
XX 118, 124—invaded by Napoleon, 791 — overthrow of the Republic by Napoleon, XV. 791 — Venice white, XIII. 302 — defence against the Austrians, in 1850, XIL 659-weights and measures, XXI. 806 - war with the Turks, 369. See Lombardo-Venetian

Kingdom. Venison, IX. 762.

VENIO, or VENIOV, in Holland, XXI 539 VENOSA, a town of Naples, XXI 539

VENOSA, a town of Rapies All 505 VENTILARION, XXI. 539—of collicros, &c., VII 123—of mines, XV 225—of hothouses, XI. 725, 756—bee-hives, IV. 574—by means of gas, X. 427—conducive to health, XIV. 440—ventilating shafts in the streets of London, III 497—its importance for the preservation of timber, XXI. 279-in ships, 280-fallure of Davy in attempting to ventilate the House of Commons, VII. 670.
VENTNOR, in Isle of Wight, XXI. 542,

862

Ventricles, of the brain, III. 53-of the heart, 63; XVII. 661.

Ventriculities, fossil sponges, XVII 93. VENTRILOQUISM, XXI 542, XVII. 680 Venturi (Prof.), on hydrodynamics, XII. 73,

117, 119, 120, 131-on the viscosity of water, I. 887.

Venus, goddess, XXI 543—nativity of, XV 764—of Paphos, XVII 261—a temple of, in Sicily, XX 245.

de Medici, IX. 666 - fly-trap, plant, V. 108. - genus of mollusks, XV. 850, 347.

PLANET, XXI. 543; IV. 65, 90phenomena of, 51-variations of its orbit 106—atmosphere of, 66—transit of, 62, 63—perturbation of the earth by, I. See Astronomy

VERA, town in Spain, XXI. 543.

CRUZ, Mexican State, XXI. 543; XIV. 725, 718—city founded by Cortes, VII. 418-plundered by the bucaneers,

Veracity of the Deity, XXI. 191. – in a historian, XI. 546. Verany (Signor), on mollusks, XV. 327.

#### VER-VER

VERAQUA (Santiago de), XXI. 543. Veraido (Chailes), on historical plays, VIII 145

Velati, work of, on animal magnetism,

XX. 445.
Verbens, V. 202—oil of, XVI 497—iegarded with superstation by the Druids, V 202

Verbenaceæ, nat order of plants, V. 202

Verbruggen, XXI 174 Verbs, X 761, 790—inflection of, XIII 189—in Egyptian grammar, XI 424, 427 VERCELLI, in Sardinia, XXI. 548; XIX

Verde, Islands of Cape, XXI. 543; II. 229
—— antique, XV 92.
Verdegris, VII 351.
Verden, XXI 546.

VERDUN, French city, XXI 546.

Vere (Sir Francis), XI. 572 VEREJA, Russian city, XXI. 546 VERELIUS (Olaus), XXI 546

Veretelliformes, zoophytes, XXI 986 Verge, in law, XXI, 546. Vergers, XXI 546.

VERGILIUS (Polydorus), XXI 546 Vergniaud, X. 82, 83

Vermego, river, IV 823 Vermetus, genus of mollusks, XV. 383fossil, XVII 101

VERMICELLI, XXI. 546, XIII 758. Vermicularia, fossil mollusks, XVII 101. Vermiculite, mineral, XV 80

Vermiformes, zoophytes, XXI 986. Vermigi ada, zoophytes, XXI 984. Vermigi ada, zoophytes, XXI 984. Vermin, XXI 546, VI 498. Vermin, XXI 546—on the domestic ani-

mals, 579. VERMONT, American state, XXI. 550, 419

-wine of, 888. Vernation, V 86.

Verneuil (M de), on the geology of Spain, XX 484 485.

VERNON (Edward, Admiral), XXI. 551his expedition against Portobello and Carthagena, V. 458

French city, XXI. 551.

(Mount), Washington's residence, XXI 753, 761, 764.

Vermuyden, an embanker, VIII 643
Vernova, in Italy, XXI. 551—Academy
of Sciences at, II 63—amphitheatic,

731 - ancient painters of, XVII. 69-Congress of, in 1822, X. 184.

VERONESE (Paul), painter, XXI 552; VI 59; III. 710; XVII. 71. See Caglian Veronica, legend of her handkerchief, XII 765.

Veronicella, genus of mollusks, XV 374 Verres, impeachment of, XIX. 322 Cicero's oration against, VI. 717.

Verri (Count de), on political economy, XVIII, 222.

Verracluo (Andrea), painter and sculptor, XIX. 861

Verrucca, fossils, XVII 101.

VERSAILLES, XXI 552 — aqueduct from Marly to, III. 336 — palace of, 453— population of, X. 277—accident on the railway of, 219

Verse, in poetry, XIX. 254. Versetz, Hungarian city, XXI. 552. VERT, in heraldry, XXL 552; XL 324. and venison, XX. 209.

Vertebræ, human, III 4, 5, 6, 7, 8—muscles of the, 38—of mammalia, 75; of buds, 83; of reptiles, 86; of fishes, 89; of serpents, XIX. 43.

Vertebrata, II. 771, 772; IX 59; XII. 205; characteristics of, III. 185, 192 classes of, 192-fossil, XVII. 115-number known, 631

Vertical, in astronomy, IV. 1. Vertigo, disease, in the domestic animals, XXI. 574.

VERTOT (René Aubert de), XXI 552. VERTUE (George), XXI. 558.

Vertunien (Francis), his Scaligeriana, II.

VERULAM, XXL 553. See Bacon. Verus (Lucius), XIX. 844.

## VER-VIC

Vervain, order of plants, V 202—esteemed by the Druids, VIII 188

Verviers, in Belgium, XXI 553 Vesalius (Andieas), XXI 553, XX, 817; II 758-his character of Dubois or Sylvius, 757—his anatomical discoveries, 758

Vespa, genus of insects, IX. 197 VESPASIAN, Roman emperor, XXI 553, XIX. 339—his war with the Jews, XII. 773; VIII 472-Egypt under, ib.-Coliseum built by, II 730

VESPERS, XXI. 553 Vespertilionidæ, XIV 146.

Vespertilio, XIV 149. Vespiariæ, insects, IX 196

VESPUCCI (Amengo), navigator, XXI 553
—first published an account of the New World, X. 472-his voyages to Brazil,

Vessels of plants, anatomy of, V 69, spnal, 70; laticiferous, 71, 72, physiology of,

VESTA, XXI 554

match, XIV 352. planet, IV. 69—discovery of, ib;

III. 808 VESTALS, XXI 554 VESTIBULE, XXI. 554.

- of the ear, III 46 VESTRY of a church, XXL 554. Vesuvian, inineral, XV. 85.

VLSUVIUS, XXI 554, 505; XX. 237, 240electricity of the air on, VIII. 578— eruption which destroyed Herculaneum and Pompeli, XI. 344-height of the mountain, XVII 643, XII 637

VESZURIM, or Wesprim, town in Hungary, XXI, 554

Vetches, culture of, III. 312, 328-folding sheep upon, 329

Veteranio, VII. 303. VETERINARY SCIENCE, XXI. 554; XI 671; II 357

Veto Act, V 669; VI 405 Vettori (Francisco), Machiavelli's letter to, XIII. 781.

VEVAY, Swiss town, XXI. 580. Vexillum, in botany, V. 124. Viadana (L), XV. 720.

VIADUCT, XXL 580, XII. 597 — over Tweed at Berwick, IV 682—Crumlin, XII. 597—on iallways, XVIII 762 Viana, in Poitugal, XXI. 580.

VIAREGGIO, XXI. 580. VIATRA, XXI 580, XIX. 521. VIAZMA, XXI. 580

Vibiation of musical instruments, IL 107, 109—of a musical string, XV. 702—of air, XVIII. 70.

Vibrio, genus of animalcules, III. 200. Viburnum, genus of plants, XVII. 764. VICAR, XXI. 580; VIII. 743; XVII. 309 Vicary (Thomas), II. 760. Vicat on mortars, XX. 714

Vice, Aristotle on, III. 565—according to Socrates, a mistake of the judgment, -according to XX. 398, 401.

Vice-Chancellor of Oxford, XXI 450. VICENZA, XXI. 580. VIOH, XXI 581.

Vichy, mineral waters of, XV. 39. Vici on hydraulics, XII. 74; VII 2. Vick (II. de), his clock, VII. 2.

VICO (G. Battista), XXI 581 - on the growth and decay of nations, XI. 544

- lake, XVII 242 Vicq D'Azyr on the biain, IL 762, 820. Vicramaditya, Indian king, XVII. 519-era of, VI 676. Victor Amadeus, Valdenses persecuted by,

XXI. 500. (CLAUDE PREERIN), marshal of France, XXI 582; X. 154. (J), his works on insects, IX. 22.

mesmeric patient, XX 422, 423. (Sexrus A.), Latin historian, XXI.

Victoria, XIV. 711, 712. and Albert, steam-yacht, described,

XX. 665. Bridge, at Montreal, XV. 522. Docks, London, XIII. 661.

# VIC-VIL

Victoria Falls, in the Zambesi, XVII 608.

- in Hong-Kong, XI 615. - Land, X. 475, XVII 581.

Park, London, XIII 668 planet, IV. 91

Port, in New Zealand, XVI 235 or Port-Phillip, XXI 582—history of, IV 286—gold discovery in, 289 produce of the gold-fields, 290—population and immigration, 291-commerce. 292 - Times newspaper on the recent progress of, 1b -geological survey of, XV 205 — gold-fields of, 232 — tin from, 241—yield of gold in, 163, 464 See Australia.

- town in Mexico, XIV. 728 water-lily, V. 181 - discovery of, XI 82.

- president of the Mexican republic. XIV 711, 712

Queen, the accession of, V. 665; marriage, 667, visit to Glasgow, X. 647, Eu, 220; Panis, 238, and Jersey, XII 730

Victualling establishments, at Deptford, VIII 80, at Chatham, 82; Portsmouth, XVIII 379, Plymouth, VIII 84, XVIII 20, late Victualling Board, VIII. 86. Vicuna, IV 823, 824, XVII. 473.

VIDA (Marco Guolamo), XXI. 582 Vidi (M), his ancroid barometer, IV. 459. Vidua, genus of birds, XVI 761 Vidusta, river, XII 785

VIELLE, Instrument, XXI 583 Viellot on birds, XVI 729, 730, 781. VIEN (J. Maile), painter, XXI 583.

VIENNA, XXI. 583-Academy of Surgery, II 62; of the Fine Arts, 68—university, IV 318; XXI 492—libraries, XIII. 417, 419—newspapers of, XVI. 201—porcelain factory, XVIII. 436—provisions made by the Congress of, V. 614 conferences of, in 1855, XIX. 507—be-sieged by the Turks, XXI. 369, 870— measures, 806—weights, 807.

VIENNE, in France, XXI 586 (HAUTE), in France, XXI. 586; XII. 626

VIERZON, French city, XXI 587. VIETA (Francis), XXI 587, X 504—his improvements in algebra, I. 558, II 485, 486, 555—In trigonometry, I. 559, 560—his Apollonius Gallus, III. 302

Vieussens (Raymond), anatomical discoveries of, 11, 763, 764. Vieyra (J. F.), V. 282 VIGAN, town of France, XXI. 587. VIGER (François), XXI. 587.

VIGEVANO, in the kingdom of Sardinla, XXI. 587 Viggiano, town in Naples, XXI, 587. Vigilantius, reformer, XXI, 587. Vignola, architect, XXI, 588; 111, 452.

Vinnota, architect, XXI. 88; 111. 492.
Vigny (Alfred do), French poet, XVIII.
117—lis Cinq Mars, XIX. 290.
Vigo, town in Spain, XXI. 588.
Vigorna, in zoology, XIV. 205.
Vigors (Mr), his classification of animals,
III 173—of birds, 191, n 2—on generic divisions of animals, XVI. 736.

Vikinger, VIII. 657; XIX. 745.

Vilette's burning mirrors, VI. 9, 10. Villa, Roman (modern), XIX. 369. - (A.), entomologist, IX 18. - Franca, XXI. 588—peace of, in

1859, XIX. 645. Villa-Real, in Spain, XXI. 588. Villa-Rica, climate of, V 203.

VILLAJOYOSA, in Spain, XXI. 588. VILLALON, in Spain, XXI. 588. Villaponda on Solomon's temple, III. 439.

Villaret-Joyeuse, French admiral, V. 554. VILLARS (L. II., Duke of), marshal, XXL 588; V. 451. Villarsite, mineral, XV. 80.

Ville (A. de), on fortification, IX. 814. ——— (de la), on Persian stones, VL 556. Ville-Franche, X. 405; meteorolite found near, XIV. 631.

Villegagnon (N. D. de), V. 281. Villegas, poetry of, XVIII 115. Villèle (M. de), X. 188—fall of his ministry,

#### VIL-VIN

VILLENA, a Spanish city, XXI 589 VILLENAGE, XXI 589—a species of slavery, XX 321

Villeneuve (Admiral), XVI. 138; X. 136 Villeto (Marshal de), his campaigns against the Duke of Marlborough, V. 448 et seq VILLERS (C F D de), XXI 589

on balance of power, IV 390 Villa of the aleum, III. 60-of the mucous

membrane, XVII 660. Villiers (Charles), his fictitious work on mesmerism, XX. 424

- (Charles de), his work on insects,

(F), his work on insects, IX 17. — (George), Duke of Buckingham, XXI. 589—his visit to Spain with Prince Charles, V 387—impeachment of, 390 was with France excited and mismanaged by, 391-assassination of, 392-Bacon's letters to, IV 354, 356-his connection with Bacon, 354

—— (George), second Duke of Buck-ingham, XXI 589—his Rehearsal, VIII 161, 202.

and Bowring's Report on our commercial relations with France, X. 253, extract from, 258
VILLOISON (J. B. G. D'Ansse de), XXL

VILNA, or Wilna, XXI. 589, 590; XIX 521 VILVOORDEN (F. Vilvoide), town in Belgium, XXI. 590

Vimiera, battle of, V 663; XXL 821, 708,

Viminal Hill, XIX. 356, 357.

Vimont (Dr), his collection of skulls, XVII. 563—on the skulls of animals, 565-on the varied size of the frontal sinus, 567, n

Vinago, genus of buds, XVI 794. VINAROZ, town of Spain, XXI 590.

Vince (Dr), great atmospherical refraction observed by, XVI 691

(Mr), his experiments on hydrau-lics, XII. 148, 161, 162—on the resistance of fluids, 161.

VINCENNES, in France, XXI. 590

Vincent (Bory St), on lizards, XIX 28— his division of the indigenous Americans, II 676.

(D1), on the Greek verb, VIII. 92 and a. L.

- (Dr), on the periplus of the Erythrean Sea, IL 209.

(EARL ST), XXI. 590; XVI. 134; V. 559.

— (J. C. Maria), VIII 374 — Cape, battle of, V. 559, XII. 718; XVI. 134—Rodney's victory at, V. 493.

- Gulf of, XXI 590. (ST), island of, XXI. 590-of the bread-fruit in, V. 301.

VINCI (Leonardo da), XXI 590-first distinctly stated the principle of the effects of oblique force, I. 718—his character as a painter, III 709, XVII 63, 73—on experiment, X. 377, n. 1—on pictorial invention, XV. 737—his anatomical knowledge, XIV 458—his fresco of the Last Supper, XV 3 Vinculum, in algebra, XXI. 591.

Vindingius (Paul), on anonymous books, IV. 711.

Vine, order of plants, V. 187—grape-vine, ib —dwarf-vine, XII. 445.

culture and variety of, XI. 707in the Two Sicilies, XX. 248—France, X. 247—Palestine, XVII. 190—Spain, XX. 489—Portugal, XVIII 897—Russia, XIX. 520-mode of training in Lombardy, XIII 656—in Madeira, 798—vine disease, X. 246 n., 247. See Oidium, Vinevards.

Vinegar, IX. 760, 765-making of, 767for preserving vegetables, 768.

Bible, XVIII. 548.

cel, III. 200

Hill, XII. 499 - plant, V. 217.

Vinery, XI. 727—kinds of vines for, 708. VINET (A. R.), XXI. 591—his hymns, XII.

#### VIN-VIS

Vineyards, ancient Egyptian, VIII 427in the Climea, VII 503-in New South Wales, IV 280-in Prussia, XVIII. See Vine, Wine 668. Vinland, II 698

VINNITZA, Russian town, XXL 592. Vinovium, VIII 267. VINTIMIGLIA, Italian town, XXI. 592

VIOLA, musical instrument, XXI 592, XV 709—d'Amore, XXI 592—dı Gamba,

Violaceze, nat. orden of plants, V 183. Violet, dyeing of, VIII 311

order of plants, V. 183.

Violette (M), on the preparation of charcoal for gunpowder, XI 154, n

VIOLIN, XXI 592, XV. 709-Ciemona violins, VII 491 VIOLONGELLO, XXI 592, XV 709

VIOLONE (or Double Bass), XXI 592 VIOTTI (G B), XXI 592. Viper, XIX 70—Fontana on the poison of,

IX. 753—used as a remedy for consumption, 763—poison of, XIX. 45—fiesh as diet, 49—distribution of, 52—poisonous bite of, XIV 440

Vipera, genus of serpents, XIX. 70 VILE, a town of France, XXI. 593.

Virey, his definition of animal and plant, III 169-his classification of animals 184-on spiders, 377-on the instructs of msects, IX 55.

VIRGIL, XXI 593 - translation of, by Ga win Douglas, VIII 118, 119—poetry of, XVIII. 95, 104—patronised by Mæ-cenas, XIII. 807—his description of the hoise, XI. 633—on breeding horses, 636-Warton's edition and translation of the Eclogues and Georgies, XXI 783-Pitt's translation of the America compared with that of Dryden, XVIII -Cunningham's editions, VII. 587 on dew, 765

(Polydore). See Vergilius. Viigilia lutea, XVII. 762. Vingin (General), his system of fortifica-

tion, IX. 836. - Islands, XXI. 599 - Gorda, Island, XXI 599

VIRGINIA, XXI. 597; 419 - debt of, 428—colonisation of, 432—wines, 888—pine timber of, 275—tobacco, 293, 294—newspapers of, XVI. 195.

- Roman virgin, XIX. 300. Virginity, signs of, XIV. 428. Viriathus, insurrection of, XX. 458. Virility, XIV. 425 Virot on the Deists, VII. 701.

Virtue, Aristotle on, III 558, 562, 563; XV 558—conditions of, 560—principle of, 561-principles concurrent with, 564 -measure and practical rule of, ib.

Socrates on, XX. 378.
Vis inortia, VIII. 330—vis insita, ib. 323.
Viscidity, XX. 749, 750—of water, XIX. 197.

Visconti, Italian family, XII. 650; XVII. 497, 499.

Viscosity of fluids, I. 887.

Viscount, XXI. 600; XI. 336. Viscous or plastic theory of glacial motion, X. 639.

Visdelon's account of the Chinese book Y-king, VII. 243. Viseu, Portuguese city, XXI. 600.

VISHNEI, or Vishnou, XXI. 600; V. 723; VII. 716; XI. 468; XV. 762. VISTINEI-VOLOTOROK, town in Russia, XXI.

600.

Visigoths, X. 3, 727, 728. Vision, XIV. 565; XVII. 677, 678—observations on the new theory of, I 65fallacy in Berkeley's work on, 244chief aim of Berkeley's work, 164-misapprehensions of the ancients on this subject, ib.-Voltaire's explanation of, 165, n.-progress made previously to Berkeley, 167-Dr Young on the physiology of, 900-Wheatstone on, 925 acute in the Arabs, III. 848-Aristotle on, 549—single vision with two eyes, XIV. 578; XIII. 462; XVII. 678 field of vision, XIV. 572 - binocular

#### VIS-VOL

vision, XX. 689-erect vision by inverted image, XIV 574—organs of vision in fishes, XII 291—in mollusks, XV. 323 — mynapoda, 747—bees, IV 575—sense of, in man, XIV 565, XVII 677. See Apparations, Blind, Eye, Optics. Vision (The), clipper-ship, XX 193

VISTULA, rivel, XXI 600, XVII. 605, 647, XIX. 516; XVIII. 662. Vitacea, nat order of plants, V 187

Vital phenomena, XVII. 655-vital sta-

tistics, XVIII. 886 VITEBSK, in Russia, XXI. 600. Vitellio on optics, XVIII 158—on light, XIII 449; XVI 523

Vitellius, Roman emperor, XIX. 339 VITERBO, in Italy, XXI 600—delegation, XVII 243.

Vitagis, king of the Goths in Italy, XII 641

VITORIA, Spanish city, XXI 601; II 440 —battle of, V 613; XXI 826 VITRÉ, a town of Flance, XXI 601.

Viticous humoui of the eye, III 44; XVII. 678

- electricity, VIII. 535, 537-discovery of, 525

Vitiified forts See Forts Vitinna, mollusca, XV 373

Vituol, green or non-ied, blue, white, cobalt, XV 97, 98

VITRUVIUS POLLIO (Maicus), XXI. 601as an architect, III 431-on architecas an architect, 111 451—on architecture, 432—on the origin of the Doric, lonic, and Corinthian orders, 441, 442 little ment of his works, 450-modern followers of, 1b, 477—revival of his architectural rules in Italy, 451—on dials, VII 774—on encaustic painting, XVII 52—his description of Roman baths, IV. 505 See Architecture, passım.

VITRY-LE-FRANÇAIS, XXI. 601. VITTORIA, IN SICILY, XXI 601. - in Spam See Vitoria Viverra, in zoology, XIV 166 Vivernidae, dentition of, XVI 460 VIVERO, XXI. 601

VIVES (J. L), or Ludovicus, XXI 601; I 15-ancients and moderns, compared by, 50.

- a disease in cuttle, XXI 564 Vivian (Andrew), his connection with Trevithick, L 882.

Viviani, III. 301; IV. 450—his restoration of the conics of Apollonius, XX. 300. Vivianiacem, nut. order of plants, V 184. Vivianite, mineral, XV. 100.

Viviparous animals, II, 772 VIZAGAPATAM, XXI. 601, 602. Vizetelly, his patent for plates for printing

surfaces, XVIII. 553. Vizir, Turkish, XXI. 379. Vlacq (Adrian), on logarithms, XIII 554

VLADIMIR, in Russia, XXI. 602; XIX. 521 -university of, 532. - king of Russia, XIX. 471.

Vlaming, his discovery of the island of Amsterdam, IV. 268 VLISSINGEN (or Flushing), Dutch town,

XXI 602. Vocation, or calling, in theology, XXI. 218. VOCATIVE CASE, XXI 602; X 749.

Vochyslacem, nat order of plants, V. 191 VOET (Gisbert), XXL 602—his enmity to Descartes, VI 279.

- (JOHN), XXL 603. - (J. E.), his works on insects, IX. 6. Vogel (Dr), his expedition to Africa, X. 479—his description of the Trona Lukes of Fezzan, IX. 581-on the botany of Fezzan, ib.

Voguera, in Sardinia, XXI. 603. Vogt (M), on the mollusca, XV. 387.

on rare books, IV. 709.

Voice, XVII. 679-in man, III. 8, 50brutes, 101-mechanism of, XV. 708 brutes, 101—mechanism of, Xv. 708
— compasses of voices and instruments, 714.
Vorrurz (Vincent), XXI 608.
Volborthite, mineral, XV. 104.
Volcanic rocks, XV. 181, 155—form and
positions of, 190—origin of, 192—vol-

#### VOL-VOL

canic districts of Italy, XII 636-volcanic formations, XVII 587, 589-linear arrangement of, ib .- number of, ib on the coast line of the Pacific, 590. VOLCANOES, XXI 603 — of Alabia, III.

357 - Europe, IX 384 - Iccland, XII 198, 201—Japan, 689—Java, 702—in Hawan, XVIII. 271—in Kamtschafka, Mexico, XIV 714—Nicau-agua, XVI 244—Sumatra, XX. 802— San Salvador, XIX 623—theory of meteoric stones projected from, XIV. 633—ejection of fish by, XII. 260—great age of volcanoes, XV 218—dis tance to which volcanic ashes have been carried, VI 774-antaictic volcano, X. 475—Dolomieu on, VIII 95, 96—Davy on, VII 672—volcanic products as matenals for mortars, XX 714-mud volcano of Maccaluba, III 394; X 632; of Iceland, XII. 202; Java, 703, New Zealand, XVI 232, small ones near Modena called Salzes, III. 293. See

Vesuvius, &c Volga, rivei, XXI 607, IX. 384; XVII. 606, 647; XIX. 515

Volitynia, in Russia, XXI. 607; XIX.

Volition, XIV. 582—power of, in over-coming pain, XX 416, XIX. 111, 112 -laws of, 118 See Will.

Volner (C. F. C., Comte de), XXI. 608— on Idumea, XII. 358, 359— on the Druses, VIII. 197, 199. Vologda, XXI. 608; XIX. 521.

Vologeses, XVII 312. Volsci, XXI. 608.

Volta (Alessandro), XXI 608; I. 737 and n 2, 961—his early experiments, ib. his electrophorus and condenser, ib .his straw electionneter, 962-on atmospheric electricity, ib —his cudiometer, ib —practical character of his inventions, 963-his invention of the pile known by his name, 739, 961, VIII. 530, XXI 609—his letters to Cavallo, I 963-Copley Medal conferred on, ib. -his theory of electro-motion, 964his description of the pile, ib .- distinctions conferred on, 965 — death and scientific character, ib, 966—contrasted with Galvani, 958 - experiments of, VIII. 531-his theory of hail, 586-his electrophorus, 606—condensing elec-trometer, 614—fiame electrometer, 622 -electric lamp, 625 - electric pistol, 626-his discoveries, XXI 609

Volta-electric induction, I. 979. Voltaic battery, its use in blasting, IV.

ELECTRICITY, XXL 609; VIII. 530, I 963 et seg.—progress of, 966—decomposition by means of, VII 668, 669 -reanimation of drowned persons by, VIII. 183. See Pile of Volta, and Volta.

 lights, in lighthouses, XIII. 480.
 pile, XXI. 609 See Volta, and Pile of Volta.

VOLTARE (F. M. A. de), XXI. 656—his estimate of Montaigne, I 53—of La Rochefoucauld, 54—on mnate ideas, 251—clearly understood Berkeley's theory of vision, 165, n 1—Madame de Stadi's division of his literary life into two epochs, 277-advocated liberty at one time and necessity at another, 278 on the force of a moving body, 650helped to establish the Newtonian phineiped to establish the Newtonian par-losophy in France, 698—his character of La Buyère, V. 704—his Commen-tary on Beccaria, IV 557—his visit to Congreve, VII. 248—his Illistory of the Crusades, 527—on the Italian opera, VIII. 147—his improvement of theatrical costume, ib.—his dramatic works, ib.—on Dryden, 203—on the moral doctrines of Christ, XII. 762—his opinion of Machiavel, XIII. 781—poetry of, LI7—romances of, XIX. 288—his character of John Bernoulli, IV. 674his opposition to sacerdotal power, XIV. 462—on Rollin's Ancient History, XIX.

### VOL-WAA

251—his opinion of Pope, XVIII 324—of Massillon, XIV. 344—his friendship with Frederick the Great, XVIII 654 on the Abbé Dubois' work on Poetry and Painting, VIII 228—on Racine's Tragedies, XVIII. 745—on the Man of the Iron Mask, XII. 537. Voltaite, mmeral, XV 97. Voltameters, I 984; XXI. 619. Voltatype, I. 987; XXI 635. See Electrotype.

VOLTERRA, XXI. 670. VOLTURNO, XXI 670, XII. 638, XX. 237.

Voltzine, mineral, XV, 121. Volucella, genus of insects, IX. 242. VOLUME, XXL 670

Voluntary Controversy, XVIII. 500. - system of supporting ministers, I 542.

Volunteer armaments, XXI. 700-volun teets of 1803, V. 597.

Voluspa, XV. 767

Voluta, genus of mollusks, XV. 385 VOLUTE, in architecture, XXI. 670; III. 514—Ionic, 465, 515. Volutidæ, family of mollusks, XV 384-

fossil, XVII. 110.

Volvaria, genus of mollusks, XVII. 110, 111. Volvox, genus of animalcules, III. 199. Vomer, bone of the head, III. 23

fish, XII. 297—fossil, 345. Vondel, Dutch dramatist, XL 591. VONDET, XXI. 670.

Voorhies (W. Van), on the population of California, VI. 98. Volacity, cases of, VIII. 23-of the pike,

VORONEJ, IN RUSSIA, XXI. 670, 671; XIX.

521

Vorüsmarty (M), Hungarian poet, XXL 671; XII 20 Vorst (Conrad), XXI 671.

Vorticella convaliaria, XV 321. Vos (Martin de), Dutch painter, XXI 671.

- (Simon de), XXI. 671 Vosess, in France, XXI 671; XIX. 143. Voss (J. Heinrich), XXI. 672. Vossius (Gerard John), German scholar,

XXI. 672-on the extent of the Deluge VI. 722.

- (ISAAC), XXI. 673-on Apollo, III.

Vouet (Simon), painter, XVII 76 Voussoirs of right arches, XX. 728. Voting by ballot, IV. 399, 400.

Vowels, pronunciation of, XVII. 679-in Egyptian language, XI. 414-vowelpoints, XVII. 521—in short-hand writing, XX. 676.

Voysey on diamonds, VIII. 2. VULCAN, XXI. 673.

Vulcano, island, XXI. 673; XIII 502; XX. 246.

Vulgar fractions, III. 597

VULGATE, XXL 673; IV 701, XIX. 840 -inaccurate edition of, XVIII. 543. Vulliamy (M.), on clock-making, VII. 19, 21, 22,

Vulpinite, minerals, XV 96. Valsella, genus of mollusks, XV 347, 348. Vultur, genus of birds, XVI. 738.

Vulture, XVI. 738; XVII. 633-bearded, 740; black, 789—Californian, 738—cinereous, ib.—fulvous, ib—gingi, 740—king, 739—vultures in Egypt, VIII. 438. - Mount, XX. 236.

Vulturidæ, family of birds, XVI. 738. Vulva, III. 71.

Vynckt (Vander), History of Flanders, XI. 562

Vyse (General), his discoveries, XI. 370, 411; VIII. 500 — value of his researches, 502.

W, letter of the alphabet, XXI. 674. Wasgen (Dr) on Kup's pictures, XIII.

## WAB-WAL

Wabash, river, XII 362, 373 Wace (Robert), poet, XXI 674 Wacke, rock, XV 135 Wad, mineral, XV 112. Wadan, IX 528 Wadding (Luke), XXI 674.

Wade (Thomas) on dry rot, VIII 207, 208, 209, 212

Waders, order of birds, XVI 794 Wadham College, Oxford, XXI 459. Wadi Doan, in Arabia, III 857. - Tuáriak, XVIII. 819

Wadstroem (Carl Berns), XXI 674 Wady, Arabian guardian, III. 352 Wagers, law of, X 394

WAGES, XXI 674-acts regulating, VII 376, n -their increase reduces the profit of stock, 386-effect of high prices of provisions on, ib -effect of their fluctuation on value, XVIII 248-taxes on, XXI 47-variations in the natural rate of, 1b - supply of labour not speedily accommodated to these variations, 48-advantages of a rise of, 48 disadvantages of a fall, ib -raised by taxes on new produce, 64—combina-tions to raise, VII 160—act of 1350 regulating, 161—increased in proportion to taxation, XXI 41-in Dumfilesshire, VIII 287-in California, XVIII 466-in Australia, 467-rise of owing to emigration, ib—in United States, XXI. 425—of woollen manufactures, 919

WAIRS, XXI 680 Waggons, for railways, XVIII. 781, 782,

Waggon steam boiler, XX. 615, 587. Wagler on birds, XVI 783 Wagnerite, mineral, XV 74 Wagram, battle of, X 152; XXI 711

Wagtal, bird, XVI 756. Wahabyz, III. 363; VIII 498 Wahlenberg on the vegetation of Lapland, XIII 235

Warles (Mr) on the geological relations of msects, IX 72.

Waitemata, in New Zealand, XVI. 233,

Wake (Mr), his account of a defence against the sepoy insurrection of 1857, XVI

WAREFIELD (Gilbort), XXI. 680—Hermann's character of, VII 586, n. 7.
—— in Yorkshire, XXI. 680; battle of,

VIII 690. - (Mr), on the corn laws, VII 385.

WAKES, XXI 682. WALACHIA, XXI 682—language of, IX. 391, XI 22; XIII 214—weights and measures of, XXI. 814. See Moldavia Walachians in Hungary, XII 11—in Tur-

key, XXI 378 WALOH (J Georg), German divine, XXI.

(J. E IMMANUEL), XXI 684. (C W. Franz), XXI 684. (Karl Friedrich), XXI 684 WALCHEREN, Dutch Island, XXI 684

British expedition to, V 607. Walchowite, mineral, XV 124. Walckenser (C. A.), his works on insects,

IX. 18—on spiders, III 390. Walckiere de St. Amand, his electrical machine, VIII 605.

WALDECK, in Germany, XXI 684 WALDENSES, or Valdenses, XXI. 685. See Valdenses

Waldheim (G F. de), his works on insects, IX 14.

Waldheimia, genus of mollusks, XV. 838. Waldo, XXI 685 See Valdo.

Waldstattor See, XX. 889.
Waltes, XXI. 685—extent in square miles,
YIII. 715—cattle, II. 842—invaded by Egbert, VIII. 657—annexed to the English crown, 680—Owen Glendower's insurrections, 687 - population, 755iron manufactures of, XII. 574—Silu-rian rocks in, XV 196—carboniferous rocks, 201, 208 — gold in, 233 — lead mines of, 244—friendly societies in, X 810-arms of, XI. 828-Calvinistic me-

## WAL—WAL

thodists, XIV 693-Welsh language, V.

Wales (Prince of), XI 836, XIX 456 (New South), XXI 685 See Australia

Walferdin's thermometers, XXI 224, 225 Walker on the revival of the drama in Italy, VIII 143, 148

- on the orbit of Uranus and Neptune, I 832

- on the discharge of the Tay, XVI. 88

(Sir Baldwin), surveyor to the navy, XX 137

(Francis), his works on insects. IX 14

(Dr), professor of natural history in the University of Edinburgh, XII.

(Rev George), XII 489, 490. Walker's rope machine, XIX 410 Walking, muscles employed in, III 42 Walks, garden, XI. 747—edgings of, 748. Wall (Dr), on electricity, VIII 525, 526 WALLACE (Sir William), XXI 685, XIX

(WILLIAM), professor in University of Eduburgh, XXI 687—on catena-rian curves, I 876—his expression for the reciprocal of an arc, II 560—his endograph, VIII 518—on the loss of weight in beef by roasting, IX. 765.

(Mr), of Berwick Mains, his mode of cultivating pototoes, II. 816.

(Robert, of Kelly), on the quantity of spawn in salmon, IX 616, n. (Mr), his character of Hector

Boyce, V. 254 Wallachia See Walachia Wallachs, XI. 15.

Wallenberg (Jacob), Swedish author, XIX 609.

WALLENSTADT, lake of, XXI 687; XX 889.

Wallenstein (A. W. E.), Duke of Mecklenburg, XXI 687; XX 850 WALLER (Edmund), XXI. 688—poetry of

XVIII. 122-quotation from, on tea, XXI. 88

-(Sir William), V. 431.

Wallenus, IV 662 Wallflower, V. 117, 136, 137, 140, 141. Wallin (Archbishop), Swedish author, XIX. 699

Wallingford, in Berks, XXI. 691 WALLIS (John), XXI. 601; I 705, n. 8 his arithmetic of infinites, 034; IX, 671-was the first who founded a system of statues on the equality of the opposite momenta, I 651-on conic on the quadrature

Wallo, XX. 51. Walloon language, places where spoken, IV 601, 615.

Walls, of Athens, IV 160, 171-of Rome, XIX 862-rubble walls, V 738-retaining, VII. 325 - thickness of, 328-on farms, II 269-carthen, for embankments, VIII. 644-forms of, for tidal harbours, XI 220-garden walls, 609hot walls in gardens, 700-river-walls, XVI 71-pressure of earth, &c., against, XX 719-resistance of, 720-construction of, 721-arches in oblique walls, 729; in circular, 780—measurement of, V. 786, 740.

one of the Orkney islands, XVI. 718

WALLSEND, English village, XXI. 691-WALLEEND, Engush village, XXI. 691—gas from the coal of, X 414
WALMER, village in Kent, XXI. 691—castle, XIII 68; death of the Duke of Wellington at, V. 672; XXI. 880.
Walmesley (Dr Charles) completed the

Newtonian theory of the moon, I. 780-

notice of his life, ib. n. Walnut, order of plants, V. 208.

tree, XVII. 764—culture of, XI. 717—wood of, XXI. 278; gun-stocks made of, XI. 100-walnut-oil, XVI. 496

## WAL-WAR

Walnuts, XVI 395

Walnut-peel, as a dyc-stuff, VIII 307 WALPOLE (Sir Robert), Earl of Orford, XXI 691—his plan for lessening the national debt, V 456—his excise scheme, 457, XXI 42—his resignation, V 458 his quarrel with Pulteney, XVIII 684. -(Horace), XXI 692-Walpoliana, or literary conversations of, II. 739-

patronsed pointed architecture, III 457—his Mysterious Mother, VIII 166—romances of, XIX 276—encedote of Fielding related by, IX 541, n. 1—on Hume in Paris, XII 4 Walrus, XIV 173-its skull and teeth,

XVI 463—tusks of, as ivoly, XII 663—in Greenland, XI 43

WALSALL, in Stafford, XXI 694; XX 581 -railway connected with, ib

Walsh (William), critic, XXI 694 (Mr), on the electricity of the torpedo, I 738, VIII 572; and gymnotus electricus, 575.

Walsingham (Sir Francis), XXI 694; VIII 636

- abbey, in Norfolk, XVI 291. WALTER (John), XXI 694—establishment

of The Times by, XVI. 187

(T G ), of Beilin, on parts of structure without nerves, II 813 WALTHAM ABBEY, town in Essex, XXI

Cross, XI 360 in Massachusetts, XIV 341.

Walther, astronomer, III 796

Walton (Brian), XXI 695—his Polyglot Bible, IV 698, 707; XVIII 206. (ISAAO), XXI 695—on angling,

III. 149 n, 152, 156 n., 161—editions of his Complete Angler, 163—on George Herbert, XI. 343—on Hooker, 621—his Life of Sir H. Wotton, XXI. 933.

naval officer, XX 241, and n

(John), his papers on insects, IX. 22.

Walworth (Sir William), XIII. 110; VIII. 684.

Wamba, king of the Goths, XX 400 Wanderou, species of monkey, XIV. 111. Wandle, river, XX. 837.

WANDSWORTH, in Surrey, XXI. 698—the orders of, XVIII. 488 Wangenheim (General), anecdote of Ber-

nadotte and, VII. 569.

Wanlockhead, in Dumfliesshire, lead mines of, VIII. 238—yield of lead in 1854, XV 246—apparatus for conden-

sing lead fumes at, XIII. 300. Wantage, in Berks, XXI. 696. Wants, in coal beds, VII. 116. Wapenshawings, XV. 8 Wapentakes, II. 481. Wapiti, in zoology, XIV. 207.

WAR, XXI. 697—the principal cause of mankind degenerating into a savage state, I. 452-use of balloons in, IL 180, 184-among the North American Indians, 682-manner in which it enhances prices, III. 199-history of, 619 -effects of the invention of gunpowder on, VI. 624-chivalry impaired by the civil wars in France and England, ib.—colonies a grand source of, VII. 146 power of governments strengthened by, 147-effects of war expenditure on the price of commodities and income of individuals, 190-bad effects of, 194-pernicious to trade, 198, 200-Machiavelli on the art of, XIII. 779-rights of nations in time of, 285—what is requisite to make a war just? ib.—what are just modes of carrying it on? ib .- articles contraband of, XVI. 156-articles of war, 107-appointment of a secretary of state for, XVII. 298-establishments for, in France, X. 270-regarded as anti-Christian by Quakers, XVIII. 717 -seven years' war, XI. 878; XVIII. 652; XIX. 482—wars of ants, III. 265; of bees, IV. 582. See Army, Artillery, Tactics, Thirty Years' War, Fortification, &c.

War-horse, XI. 656.

#### WAR—WAR

War-taxes, X 838 Warasdin, in Austria, XXI 728 Warbeck (Perkin), VIII 696—his proceedings in Iteland, XII 474—his visit to Scotland, XIX. 764

Warblers, birds, XVI 756. Warbles, in the horse, XXI. 579 WARBURTON (E B George), XXI 728. (WILLIAM), XXI 728—his opinion of Malebranche's talents, I 80, n 2—

his hostility to Dr Clarke, 146, n. 1-on the Jewish ignorance of a future state, VI. 637-on Æneas' descent into hell, X 611-Gibbon's attack on, ib -his connection with Hurd, XII 49—his friendship with Pope, XVIII 334—on mysteries, XV. 754—on ancient punc-tuation, XVIII 686—his work on the

Doctrine of Grace, XXI 835.

Ward (Seth), XXI 731—astronomical system of, I 611

- (Commander), his life-belts, XIII 440

(Mr), on the policy of Spain to her American possessions, II. 701. Warde (Mr), lus hounds, XI 707. Wardens, XXI 731. See Grosswardein

Warden (Joseph), his work on bees, IX 3 of the Cinque ports, VI. 728.

Wardian cases for plants, V. 107.
Wardian (Ralph, D.D.), XXI 731—on
the utilitarian view of moral rectitude, XV. 554-on theology, XXI. 194 et seq (Henry), bishop of St Andrews XXI. 472.

Wardle (Col ), his charge against the Duke of York, V. 605.

Wans, in Hertford, XXI. 781 Warce, island, IV, 653.

Waree, island, 1V. 693.

Wareham, in Dorset, XXI. 731.

Warehousing system, XXI 41.

Warepentin (M.), astronomical labours of,
III 806—on the rate of mortality in Sweden, XV. 603.

WAREN, town in Germany, XXI. 731 W MENDORF, in Westphalia, XXI, 732 Warham (Archbishop), VII, 481 Waring (Edward), I, 712, and n. 2. Warington (Mr), on aquaria, XV 328

- (Mr), on green and black tea, XXI 80. WARRWORTH, in Northumberland, XXI

Varitire (Mr), on the chemical influence of electricity, VIII. 594. Warming, XXI. 732—of buildings, XIX. 613—of hot-houses, XI. 720. See Stove.

WARMINSTER, in Wilts, XXI. 732 Warnery, on the qualifications of military

officers, XXI. 609-on Casar's invasion of Britain, 700-on war, 703. Warows of South America, IX. 849.

Warr, XXI. 732, 780, 783—cotton, VII. 448—and weft, in lace-making, XIII. 143—machine, 144. See Weaving.

Warping and warping mill, in weaving, XXI. 783.

-, fertilization of land by, II. 968advantages of, XII. 619-as practised on the Humber, II. 864 Warrant officers of the navy, XVI. 102-

warrants for opening letters in the postoffice, XVIII. 412.

WARRANTY, In law, XXI. 732.
WEITER (Sir T. Borlase), V. 617.

(Dr), on stammering, XX. 585.

Warrior, steam-frigate, description of,

XX. 665.
WARSAW, XXI. 782—libraries in, XIII. 425—taken by Charles XII., XX. 858 grand duchy of, XVIII. 153.

WARTA, or Wartha, river, XXI. 788; XIX. 516.

Wartburg, castle of, VIII. 519—Luther at, XIII. 728.

Wart-bog, dentition of, XVI. 468. Wartmann on the influence of electricity on plants, V. 170. WARTON (Joseph), XXI. 738-his charge WAR-WAT

of plagiarism against Dr Conyers Middleton, IV 637

WARTON, (THOMAS), XXI 734-on the scarcity and value of books in the middle ages, V 11-on Rowley's poems VI 431-on Dunbar's poetry, VIII. 247 on English minstrels, XV 252

Warts on the domestic animals, treatment of, XXI 579

WARWICK, English town, XXI 786 carl of, VIII. 690 See Dudley (Sir R.)

(Sir Philip), his notice of Crom-well, VII 510

WARWICKSHIRE, XXI 737 — population and value of property, VIII 754. WASH (The), XXI. 739

-, ın distilling, VIII. 49. Washing establishments, in London, XIX.

Washington (George), XXI 740; II 129, XXI 484 et seq—his administration, 438—his British ancestors, XVI 298 monument to, at Baltimore, IV 405 -, territory in United States, XXI

-, capital of United States, XXI 706-706—captured by the British in 1814, V 617—library of Congress at, XIII

-Smithson's library at, 1b -meteorological observations at, XIV 688. , in Rhode Island, XIX. 147. Wash-leather, XIII 310

Wasps, IX 197-endeavour to bite and sting after decapitation, 177-hostile to the bee, IV. 588-instincts of, XII. 891 -their sting poisonous, XIV. 440.

Waste lands, cultivation of, II 358

——book, in book-keeping, V 28.
Watch, XXI 768; VII 27—regulation
of, 28—repeating watches, 34—keyless, -fusce of, 28 - escapements, electro-gilding of watch-cases, X. 626-Mr Atwood on balances, IV. 231 - watch-making in Switzerland, XX 890-Geneva, X 449-Neuchatel, XVI. 153 —improvements in, XIII 686. Watchman's clock, VII 18.

Water, compressibility of, I 723; II 101, 102, VI 201; XII 77-viscosity of, I 887—maximum density of, 941—transmission of sound by, II. 99, 102—in the atmosphere, 376—absorbed by the roots of plants, 378—decomposition of in plants, 383—composition of, I. 929, 930; VI. 352, VIII 594—chemical character of, VI 458, 459—its great solvent power, 460—cruption of, from Mount Ætna, II. 196—scarce in Arabia, III. 344 et seq.—temperature of boiling water applied to the measurement of heights, IV. 467-water of crystallisation, VII. 545-as a remedy in fever and other diseases, 594—hard and soft water, VI. 460, 473—modes of cooling it, VII. 100 et seq.—congolation of, 103; XI 209—artificial congolation, 271, 275; VII. 104—loses its air in the act of freezing, 103-Dr Wollaston's experiments and electrical apparatus for the decomposition of, VIII 595— embankments against, 643—alimentary qualities of, 20; IX 765-difficulty of breathing caused by the pressure of, VIII. 60—in gardening, XI. 608—heating hot-houses, &c., with, 721—mechanical powers and properties of, XII. 69 pressure and equilibrium of, 78-specifle gravity of, 84—water in motion, 103—jets of, 130—machines for raising, 174 discharge of, 112, 115-its flow over weirs, &c, 121-its motion in pipes, 131; XVIII. 61; in canals, XII. 136water-bellows, 183—traffic in water in Lambardy, XIII. 648—London water companies, 664; supply of to London, ib., 665-importance of supply of pot-able water, XIV. 443-a non-conductor, 643-evaporation and condensation of, composition of sea-water, XVII. 572;
XX. 649; specific gravity of, XVII.  $\mathbf{WAT}$ — $\mathbf{WAT}$ 

572-colour of, 574-in landscape gardening, 772—ebullition of in air-pump, XVIII 40—air combined with, 50 how obstructed in moving along canals, 62—circles formed by dropping a pebble in, 71-why rendered scarce by frost, 72-its importance for sanitary purposes, XIX 609, 616-distilled water for the navy, XX 24—decomposed by galvanism, XXI 628—ordeal by, XVI. 701 See Aqueduct, Deluge, Evaporation, Filter, Fluids, Hydrodynamics, Irrigation, Mineral Waters. Pipes, Pump, Sea, River, Steam, Waterworks, Wave, &c

Water in the brain, XXL 575. See Hydrocephalus Water-barometer, IV 452, and n.

Water-battery, XXI 619. Water-bean, order of plants, V 181 Water-chestnut, V 192.

Water-clock, VI 763; VII. 564-Amontons on the, II 724

Water-colours, drawing in, VIII 174 Water-column machines, XII. 179
Water-cranes, on railways, XVIII 777. Water-cure. See Hydropathists, Preissmtz

Muzerfalls, in Europe, XVII 605—in Norway, XVI 321—of the Rhine, XIX 144; the Zambesi, XVII 608; Missouri, 604—in California, 1b—in Cardigan-shire, VI 233—fall of Niagara, 135; XVI 241-of Tequendama, III 181; IV 808.

WATERFORD, Irish county, XXI. 768—XII 508, 515, 517.

-, city, XXI. 771—besieged by Cromwell, XII 484

Water-gas, X. 427; XIX. 616. Water-glass, surface of stones protected by, XX 785.

Water-hens, XVI 806, 807-shooting of. XX 218.

Waterhouse (G R), his contributions to entomology, 1X 21—his enumeration of ruminants, XVII. 632
Watering places. See Mineral Springs

WATERLAND (Daniel, D.D.), XXI 771-on the Athanasian ereed, IV. 158-on the abuse of demonstrations, XIV. 602. Waterlandians, XIV. 501.

Water-lily, order of plants, V. 181. Water-lines, in ship-building, XX. 184,

Waterloo, battle of, V 620, X. 172; XXI 828—illustrative plan of, 717—Blucher at, IV. 798—conduct of the British infantry at, III. 667.

Waterloo-bridge, London, V 368; XIII. 676; XIX 12—opening of, XXI 829 Water-meadows, XII. 612-management of, 616-advantages of, 619-Cato and Columella on, 621. See Irrigation.

Water-ouzel, bird, XVI. 758. Water-pepper, order of plants, V. 184. Water-pitcher, order of plants, V. 182. Water-plantain, order of plants, V. 214. Water-pot shells, XV. 850.

Water-rail, bird, XVI 807 Water-retting of flax and hemp, IX. 656;

Water-shield, order of plants, V 181. Waterspour, XXI. 771; XIV. 684—electrical origin of, VIII. 586—in Orkney, XVI 721.

Waterton (Mr), on the sloth, XIV. 190on the armadillo, 191 - large serpent killed by, XIX. 61, n. 8-on the alligator, 27-on birds, XVI 732, 750, 759

Water-vole, teeth of, XVI. 454. Water-whoels, XII. 163—defects of common kinds, I. 889—principle of greatest advantage in, 890.

WATERWORKS, XXI. 772—Crawley, VIII. 405—connected with Glasgow, X 649— Greenock, XI. 47—London, XIII. 664—of the crystal-palace, Sydenham, XX. 892. See Aqueduct, Hydrodynamics, Pines.

Water-wort, order of plants, V 213. Watered, town in Herts, XXI 772. Watkins (Francis), on electro-magnetism,  $\mathrm{WAT}\mathrm{--WAV}$ 

XIV 75, 76—his rotatory magnet, XXI 639—his revolving battery, 640—his revolving helices, ib -his thermo-electric pile, 653 Watling Street, IV 666; XI 350

WATSON (Richard), bishop, XXI 772 (George), his Hospital, VIII 402.

(John), his Hospital, VIII 402 (Dr Joseph), on the education of the deaf and dumb, VII 676, 678, 682

et seq.
(Sir William), on electricity, VIII 526, 548.

Brush plants, V. 280: XIX 795
— (Dr Forbes), on the raw material of textile manufactures, XXI 907

WATT (James), XXI. 773; X 648, I 865first to study the properties of steam as a philosopher and practical mechanist, 866 - estimate of his genius, ib -his birth and early history, ib --lus connection with Dr Black, 867, IV 739—his obligations to Dr Black, I. 867, and n 5-his position in Glasgow college, 867-his first experiments on steam, ib -his principle of separate condensation, 868; XX 576-personal character, I 869, 870-close of his life, 870-his intimacy with, and character he gives of Prof Robison, 871, 873 - Arago's eloge of, 911-his behaviour in reference to Cavendish as the discoverer of the composition of water, 929, 930-introduced into Britain the use of chlorine in bleaching, IV. 758, 759, 760—his connection with Mr Boulton, V. 246 on the application of the steam-engine to cotton spinning, VII 446—on the effects of heat in converting water into steam, XI. 271-on the Cornish mines, XV. 227, n —his experiments on the elastic force of steam, XX. 557—his history of his improvements on the steam-engine, 576, 577 - illustrations and details of those improvements, 577 -his pumping-engine of 1768, ib engine of revolution, 580-his description of the Albion Mill engines, ib.-his expansive engine, 579—his steam-boiler, 587 - his invention to secure parallel motion, 502, 503, XIV. 402-his governor, XX 595-his crank for steam-ongines, 581 - his mode of estimating horse-power, 602-his patent for preventing smoke in furnaces, \$53, \$55-application of his steam-engine to navigation, 637—his use of the term duty, 612—Watt's approximate, XIV

(ROBERT), XXI, 778. (R.), executed for high treason, V.

(Dr Robert), on the mortality of children, XV. 612.

Gregory), on the structure of basalt, XV. 166.
Watt's retting process, II. 338.
Wattle bird, XVI. 766.

—— bark, in tanning, XIII. 806 Warts (Dr Isaac), XXI. 778—his hymns,

XII 189. -(Thomas), on the English Mercury

(Indinan, on the English Mercury of 1588, XVI. 180. Waughope (General), VIII. 492. Waugh (Dhoondiah), Wellington's opera-tions against, XXI. 818.

Wavne, town in Belgium, XXI. 779 Waves, XVII. 580—experiments on, I. 888, 889-force of, XI. 216-relation between their height and depth of water, 218—height of at Lybster, in Caithness-shire, 224—their impulse against a pier, 220-reduction in height after entering harbour, 222-oscillation of waves, XII. 71, 72, 74 individuals by whom the subject has been investigated, 74, 75, 76 undulation of, 162-tidal wave of estuaries, XVI. 64; laws of its propagation, ib.—tide-wave, XVII. 680—broadth and breadily and velocity of waves, 582-of air and water, in some respects similar, XVIII. 71—force of, on a ship in motion, XX. 180

#### WAV-WED

wind-waves, XVII 581-wave-surface in optics, XVI 548, n 1
Waves (atmospheric), XIV 650 See Atmosphere.

Wavellite, mineral, XV 74—Sir H Davy on, VII. 668

Waveney, river, XVI 289.

Wax, XXI 779, II 381, IV 572—of the ear, III. 46; XVII. 679—bleaching of, IV. 771-in plants, V 78-produced by insects, IX 173-gilding-wax, X 626use of, in modelling and casting, XIX. 844 — wax-candles, VI 171 — specific gravity of, XII 88—in painting, VIII 054—sealing-wax, XXI 779. Wax myrtle, V. 207

Wax-paper process, in photography, XVII. 549.

Wax-wing, bird, XVI 750 Way, permanent, in railways, XVIII. 758
—in the Great Western, 755

Way-leaves, XVIII. 752. Way-faring tree, XVII 764

Way (Prof ), on soils, II 396. Wazirabad, town in the Punjab, XVIII

Wealden rocks, XV 209—in Surrey, XX 836—Sussex, 839—weald clay, XV. 209; in Kent, XIII. 64—flora of, V 237. Weales' Engineer's Pocket-book, XX 779

780. Wealth, defined, XVIII. 210-production

of, 224-distribution of, 239-consumption of, 256—an evidence of superior good conduct, XXI. 41. Weaning of lambs, II 353 Weapon-shawings, XIX 758. See Wapen-

shawings

Weapons, stone, III 421. Wear, river, dredging of, XVI 69-phy

sical characteristics of, 88.
Weardale, lead mines of, VIII 266. Wearmouth, iron bridge at, V. 858, 360; XII. 577, 578

Weasel, quadruped, XIV 157. Climate, Weather

Veather See Atmosphere, Climate, Meteorology, Rain, Wind, Temperature,

Weatherby's Stud-book, XI. 645 Weather-glass, IV. 453; XVIII 26; XXI 221. See Barometer. Weather-helm, XX 160.

Weaver, river in Cheshire, VI. 529; XIX

582—salt carried on, 585. Weavers, health of, XIV 442—foreign weavers in Norwich, XXI. 780-exiled by Charles I ib.—French weavers in Britain, ib —their petition in 1713, 781—attacks of, on the East India trade,

WEAVING, XXI 780—of tapestry, 20—of wool, 928—by power, VII. 450. See Cotton manufacture, Design, Silk manufacture, Woollen manufacture.

Webb (Captain) on the Himalaya mountains, XI 450 - his expedition to the sources of the Ganges, X 400

—— (Barker), on the botany of the Cape Verde Islands, XXI 544

WEBER (Carl Maria Von), XXI. 794 - (E. Heinrich and Wilhelm), on

waves, I. 888; XII. 75.

— (Prof.), of Göttingen, on electric telegraphs, XXI 96, 97. (F.), his works on insects, IX 8.

(M.), on romance, XIX. 265. Web-footed birds, XVI. 808. See Palmi-

Webs, of spiders, III 374. WEBSTER (Daniel), American statesman, XXI. 795, 441.

- (John), dramatist, XXI. 796. (NOAH), XXI. 796.

Weddle (Thomas), his mathematical rules, XX. 142, 143. Wedemeyer on the capillaries, II. 799.

Wedge, in mechanics, XXI. 796. Wedging, in carpentry, V. 747-fox-tail

wedging, VI 263. WEDGWOOD (Joseph), XXI. 796; XVIII. 433; XX. 580—his pyrometer, I 763; XVIII. 703—importance of his inventions in pottery, V. 508.

#### WED -WEL

Wedgwood (Thomas), his photographic experiments, XVII 544; I 922. WEDNESBURY, in Stafford, XXI. 797-

manufactures of, XX 530
WEDNESDAY, XXI. 797—origin of the

name, I 458, n 2, VI 75—Ash-Wednesday, XXI. 797 Weed, disease in horses, XXI 574

Weedon-Beck, village in Northampton-shire, XXI 797.

Weeds, removal of, from cultivated land,

Week, VI 75, XIX. 560.

Weevil, insect, IX. 141.

—— victualling yard at, VIII 84

Wegscheider, on theology, XXI 194 et

Weguelin (Mr), his evidence on deposits in the Bank of England, XV. 473. Wehrlite, mineral, XV 90

WEIGHING MACHINE, XXI 797; II. 284;

XIV. 415. See Balance
Weight, of liquids, XIV 417—of the
human body, III 2; of individual
organs, 3—gross and nett, 595—of air, XVIII. 23 - effect of air on, 47. See Gravity, Weights
\_\_\_\_\_, in phrenology, XVII 568

WEIGHTON, market, in Yorkshire, XXI 798

WEIGHTS AND MEASURES, XXI 798 Belgian, IV. 626-modern Egyptian, VIII. 517—common standard of, proposed by the French Convention, I 836; IX 551; X 83—tables of, III. 584; XXI 805, 806, 808—assay weights, III 767— Beccana's plan of, IV, 559—present French, X. 283—Greek, XI 15—of Chile, VI 552—Dr Cumberland on Jewish weights, VII. 580.

Weiher, his attack on the belief in witch

craft and sorcery, XIV. 422
Weimar, XXI. 814—library at, X. 592
Weirs, fall of water over, XII 121—in rivers, XIX. 215, IX. 619—waste weirs in canals, XVI. 56 Weishaupt (Adam), XII. 863.

Weisse (Christian Felix), XXI. 814. - (Prof.), on animalcules, III 209. -'s catalogue of stars, IV. 95. - account of Dr Wolfart's magnetic

practice, XX. 444.
Weiss (Prof.), his arrangement of minerals,

XV. 67—his speculum, XX 811, n. Weissemburg, a blind man, IV 780 Weissenburg, in Bavaria, XXI. 814 Weissenfels, town in Saxony, XXI. 814 Weissite, mineral, XV. 89.

WEISSKIRCHEN, town in Moravia, XXI

—, Austrian town, XXI. 814.
Weitbrecht, his experiments on capillary attraction, XII 91. Welbeck, Duke of Portland's plantations

at, XXI. 271. Weld, dyestuff, VIII. 295 — dying wool with, 297; silk, 298; cotton and linen,

299 Welland canal, VI, 136, 154,

—, English river, XIII 491. Welles (Sir Robert), VIII. 691.

Wellesley (Richard Colley), Marquis, XXI 814; V. 606, 638—his administra-tion in India, XI 501, 503; his foreign policy, ib.—on European agency in India, 523—on the newspaper censor-ship in India, XVI 203—his last interview with Pitt, XVII. 743.

Wellesly (Captain G. G.), his north-west voyage, XVIII. 171, n. Wellingborough, in Northamptonshire,

WELLINGTON (Arthur Wellesley), Duke of XXI. 815—his improvements in the army, III. 666—his order of battle, IV. his Spanish campaigns and tactics, V. 604, 606, 609 et seq —his conferences with Canning about the formation of a with Canning about the cornization of a ministry, 648—his opposition to Canning's corn bill, 650—his administration, ib.; XVII. 863—his conduct relative to Catholic emancipation, V. 652, 654, 656; XII. 501—his declaration

## WEL—WER

against Parliamentary reform, V 659; XI 63-his resignation as premier, V -member of the Congress of Vienna, expedition to Portugal, 608, X 150 . XVIII 387. 388-death of. V. 672 -his account of the battle of Waterloo, X 178-his estate in Granada, 794-his military convention with Davoust, 174 -his recommendation of Fouché, 175 his operations in India, XI 504 et sea -on Sir John Moore's campaign in Spain, XV 529-his connection with Sir Robert Peel, XVII 363 et seq plan of his defence of Portugal, XXI 706-Torres Vedras, 707 (see that article) -his combinations at Salamanca and Waterloo, 712, 718—his friendship with Sir John Malcolm, XIX. 108

Wellington (Duke of), screw steam-ship, 665-comparative size of, 641

WELLINGTON, town in Shropshire, XXI.

-, ın Somersetshire, XXI. 831. - (Fort), IV 300

, town and province in New Zealand, XVI 234 Wellingtoma gigantea, tree, XVII. 626,

Wellmann (Alexr ), on the herring market

of Stettin, IX, 640 Wells, town in Somersetshire, XXI 831 -, in Norfolk, XXI 831

(Dr), on dew, VII 770, XI 205; XIV 658; I 954 Wells cathedral, XIX. 865—arches of the

nave, XX 733 Well-sinkers, diseases of, XIV 442.

Wellsted (Lieut), on Arabia, III 360
Wellwood (Sir H Moncreiff), on Edward's
work on the Freedom of the Will, VIII.

Wels, town in Austria, XXI 832 Welsh (Dr), his protest, and withdrawal from Assembly of Established Church of Scotland, XVIII 495.

(Mr), his balloon ascents, II. 184, n.; XIV. 640, 642, 648 - (Mr), on the thermometer, XXI. 223.

WELSHPOOL, town in N. Wales, XXI 882; XV. 518. Welter (M), on bleaching, IV 760, 759

his indigo test in bleaching, 763 Wem, town in Shropshire, XXI 832 Wemyss, glass first manufactured at, in Scotland, X. 659

Wenck (Dr), on the Theodosian code, VI. 745.

Wendish language, XIII 214. WENDOVER, town in Bucks, XXI. 832 WENER, Swedish lake, XXI 832, XX. 861

Wenham (Mr), his method of illuminating microscopic objects, XIV. 798 - on microscopic photography, 801.

WENLOCK, town in Shropshire, XXI. 832 -rocks of, XV 197, 198. Wensleydale (Baron), his peerage, XI.

836, n. ——, in Yorkshire, XXI. 957. Wentle-traps, shells, XV. 388.

WENTWORTH (Thomas), Earl of Strafford, XXI. 832; V. 808—impeachment and execution of, 896, 897; XVIII. 699—his government of Iteland, XII. 480, 481. Wenzel on chemical combination, I. 937.

Wenzels on cerebral matter, II. 818. Wepfer's anatomical researches, IL 762. Werben, battle of, XX. 849.

WERDAU, in Saxony, XXI. 883 WERDEN, in Prussia, XXI. 833. WERGELAND (H Arnold), Norwegian poet,

XXI. 834. Werk, siege of, V. 714.

Werne (Mr), on the White Nile, XVI. 270.
Werner (A. Gottlob), XXI. 834—on
minerals in veins, XV. 194—on mineral veins, 220-on the colours of minerals, 59-his doctrines advocated, in Scotland, by Prof. Jameson, XII. 684; and Dr John Murray, ib. (F. L. ZACEARIAS), dramatist,

XXI. 834.

### WER—WES

Werner (John), mathematician, I 552; III 796; X 505

(M), his ormithological atlas, XVI 732 (Jean), of Nuremberg, on the lon-grande, XIII 686

Wernerian Society of Edinburgh, XII. 685

Wornerste, mineral, XV 72

WERNIGERODE, XXI 834
Werterling (C U), his work on insects, IX. 15.

Werthenn on the sounds produced by electric currents, XXI 631. Wesel, in Prussia, XXI 834

WESER, German liver, XXI 834; X 580;

XI 211, XVII 647; XVIII 662 Wesley (John), XXI 835; XIV 691—his hymns, XII 189—his doctrines, XIV

Wesleyan Methodists, XIV 691—their places of worship in Scotland, XIX 801 Wesling (John), the first delineator of the

lacteals, II 761. Wesmael (C), his works on insects, IX.

20 Wessel (John Herman), Danish author,

Wessex, VIII 657.

West (Benjamin), painter, XXI. 835—character of his pictures, III. 717; XVII 79, 80, 84

- (GILBERT), XXI 836 West's melon and cucumber pit, XI 734 WESTBURY, in Wiltshire, XXI 836.

WESTERHAM, IN Kent, XXI 837 West India Docks, London, VIII 75; XIII, 661

Company (Dutch), XI. 58 their colony in New York, XVI 217.

WEST INDIES, XXI. 837; II. 708-attempts to transplant the bread-fruit to, V. 301—British colonies in, VII. 147— exports from Britain to, 190—Danish colonies in, 745—blood-hound of, XI. 764—Edward's History of, VIII 414—assurance offices in, XII 418—missions among the negroes of, XV 271—condition of, since abolition of slavery, XX. 827—sugar, 705—sugar-cane, 792, n—weights and measures, XXI. 814—map of, XXI Plate See the names of the different islands.

Western (the Great), steam-ship, XX. 639 -comparative size of, 641

(the Great), railway, XVIII. 753, 754, 755, 758, 761, 794-locomotives on, 780 - costs of obtaining the original acts for, 796—station on, at Swindon, XX. 881; XXI. 879

Westgarth (Mr), his reports on the colony of Victoria, IV 288, 291—on the yield of gold in, 289, 290—on the commerce of, 292-on South Australia, 295.

Westmacott (Sir Richard), sculptor, XXI. 837—character of his sculpture, XIX. 867 et seq—on Sir Thos. Lawrence, XIII 297.

WESTMEATH, Irish county, XXI. 838; XII. 508, 515, 517. Vestminster, XXI.

WESTMINSTER, XXI. 841 — Domesday Book kept at, VIII. 98—Assembly of divines at, III. 775; XVIII. 493 bridge, XIII. 676; foundations of, XX. 723, 724.

Abbey, III. 454, 489; XIII. 671—foundation of, 659—library of, 394—arches of the choir, XX. 783.

Hall, XIII 669—architecture of,

III. 488, 517—timber of its roof, VIII. 218—roof of, VII. 324, n. 2. New Palace, XIII. 508—iron roofs

of, XIX. 396—great clock at, VII. 15, 22, 23, 24—building stone used for, XX. 712; IV. 839.

- School, XIII. 667.

WESTMORLAND, or Westmoreland, XXI. 841-population and value of property, VIII. 754.

Weston (Sir Richard) on agriculture, IL

Weston-super-mare, XXI. 844.
Westphalia, XXI. 844 — population

#### WES-WHE

XVIII 663 - religious denominations in, 664-agriculture, 666, 667, 668lead mines of, 668—marble, 669—paper factories, ib—hams, 666—proportion of insane in, XIV 536—treaty of, IV 308, VI 661, X. 579, XI 575, XVIII

WESTFORT, Irish town, XXI 844 Westroy and Papa Westrey, Orkney Islands, XVI 718, 719

Westwood (W O), his entomological works, IX 20

Wethered's system of mixed steam, XX 650

WETSTEIN (John James), XXI 844—his edition of the New Testament, IV 698 Wette (De), on the Psalms, XVIII 678on theology, XXI 181 et seq

WETTER, Swedish lake, XXI 845; XX

WEXFORD, Irish county, XXI 845; XII. 508, 515, 517

—, town, XXI 848
Wey, river, XX 836—Wey and Arun
junction canal, 837

WEYMOUTH, in Doisetshire, XXI. 848, VIII 111V - Pine, tree, XVII 757, 700

Whale, XIV 231—white, 228—bottle-nosed, 231—spermaceti, ib—Greenland, 233, XI. 43-ambergus found in, II 657—eye of, III 95—upper jaw and baleen plates of, XVI 442—lower jaw of a fœtal whale, 448-whales of the southern and northern ocean specifically distinct, XVII 635-distribution of, 1b .- rare in the Baltic, IV 404-on the Lapland coast, XIII. 286-skeleton of, found near Stirling, XX 703-fossil whales, XVII. 165, 166.

Whalebone, III. 107; XIV 233; XVI 442

Whale-fishery, IX 650—of Brazil, V 209, England, VIII 728, France, X. 205, Holland, XI 583, Hull, 795; Peterhead, XVII 484.

Whale-lice, VII. 542. Whale-oil, XVI. 493.

Wharfe, and Warfedale, XXI. 957.

WHARTON (Philip, Duke of), XXI 849-Dr. Edward Young's connection with,

(Thomas), on the glands, II. 762. salt-mine, XIX 583

Wharves, on tidal rivers, XVI 79.
Whately (Archbishop), his Dissertation on the rise, progress, and corruptions of Christianity, I 447—on fallacies, IX.
478—on belief in the Christian miracles by Jews and pagans, XV. 263, n. 2-on rhetoric, XIX. 105, 121, 123.

WHEAT, XXI. 850-varieties of, II 300red-wheat, ib—steep or both for, ib—spring-wheat, 807—average yield of, 310—chemical properties of, 379, 384, 386, 388, 417, 419—wheat flour, 381, IV. 879—quantity imported from the Black Sea, in 1852, 745—the spike-let of a wheat plant, V. 115—munmy wheat, 164—culture of, in Upper Canada, VI. 146, 147-its northern lunit in Europe, IX 386—as food, 768—straw, for plaiting, XI 243—mean time of wheat harvest in different latitudes, XVII. 625-origin and distribution of, 680 - advantage of dibbling, XVIII. 338—exports of, from Odessa, XVI. 406—Dantzic wheat, VII. 652—gluten from, X. 684—culture of, in Lombardy, XIII. 655—in Chile, VI. 540. See Agriculture, under the different kingdoms and counties. Corn-laws.

Wheat-ear, bird, XVI. 755. wheat-ear, DIM, AVI. 705.
Wheatstone (Prof.), his invention of the steroscope, I. 925—his rheostats, 984;
XXI. 625—on the velocity of electric conduction, I. 985; VIII. 548—his electric telegraph, I. 986—on the electric telegraph, XXI. 100, 101, 108—inkmarker in his telegraphs, 105-descriptive notice of his telegraphs, ib. — his automatic telegraph, 106—his step-by-step telegraph, 111, 112, 115—his type-

## WHE-WHI

printing telegraph, 112-his stereoscopic principle explained, 134; XVII -his reflecting stereoscope, XX. 685 -on vision, XIV 573-on the perception of solidity, 574—on the velocity of cannon balls, XI 133, n—his application of electricity to clocks, XXI. 644 See Stereoscope

WHEEL, XXI 850, XIV 391-skew-bevel wheels, 392—conical and disc, 1b—grooved, 393—spur-wheels, 1b—teeth of, 1b, 395—pin-wheels, 396—wheel and axle motion, 388-teeth of wheels for clocks and watches, VII 88—water-wheels, XII 163 et seq — Egyptum water-wheels, VIII. 428; XII 69— dash-wheel, IV 764—Bramah's patent whool, V 274—fly-wheels, XIV. 412; IX 748, XX 589—in railway carriages, XVIII 782—paddle-wheels, XX. 656 spinning-wheel, 508

Wheel-barometer, IV. 454; XXI. 934, n. 2

Wheel-carriages See Carriage Wheeler (Sir Hugh), XVI 306 WHEELING, town in Virginia, XXI. 850. Wheel ploughs, II. 270

Wheezer, diseased horse, XXI 571. Wheler (Mr) on electrical bells, VIII 537.

Whelks, shells, XV 386, 387-egg capsules of, 389—fossil, XVII 109 Wherry, IV 800

Whewell (Prof), his preface to Sir J Mackintosh's Dissertation, I 295—his History and Philosophy of the inductive sciences, 803; XVII. 527-on the tides, I 818; XVII. 581-on philosophy as a branch of inductive science, 539his cotidal lines, I. 818—his Bridge-water Treatise, V. 364—on the dependence of morality on law, XIII. 259on the moral sense, XIV 581.

Whewellite, mineral, XV 125.
Whey, VI 523—whey-cream, VII 626—butter, ib—its nutritive and curative

qualities, XV 11 Whicheot (Dr), Shaftesbury's admiration of his sermons, VII 343.

Whidby (Mr), his plan for the Plymouth breakwater, V. 307; superintendent of that work, 809.

Whigs, origin of, V. 887—origin of the name, 428.

Whimbrel, bird, XVI. 802. Whin. See Gorse.

Whinchat, bird, XVI. 755. Whinstone. See Trap rocks. Whipper-in, XII. 47

Whipping, as a punishment, XIV. 445: XVIII 575

Whip snake, XIX 57-in India, XI 456. Whirlpool—the Maelstrom, XIII 807 Whirlwond, XXI 850, XIV 684; VIII. 422—dust-whirlwinds, XIV. 685. See

Cyclones Whiskers, IV 528. Whisky, IX. 760—manufacture of, VIII. 48—in Scotland, XIX. 805—Isla, XII.

629. See Spirits

Whist, game of, XXI 850
Whistler, diseased horse, XXI 571
Whistler, diseased horse, XXI 571
Whiston (William), XXI. 850—on the
Canticles, VI. 198—on Dr Samuel
Clarke, 757, 758—on the Deluge, VII.

WHITAKER (John), XXI. 850-on the origin of church-bells, IV. 628 - on Hannibal's passage of the Alps, VI. 208, n.—his history of Manchester, XIV. 250—on the history of King Arthur, III. 682—on bulle, V. 761

Whitbread (Mr) on the expediency of peace with France in 1800, V. 571—his resolutions regarding the navy, 599. WHITEY, in Yorkshire, XXI 852, 959.

—— (DANIEL), divine, XXI. 852—on original sin, 202. White, colour, varieties of, XV. 59-

people with complexions of that colour,

(Gilbert), of Selburne, XXI. 852 on the harvest bug, III. 389-on the

#### WHI-WIG

parental affection of brutes, V. 708—on their sociality, 703, 704.

WHITE (HENRY KIRKE), XXI 853 (JOSEPH BLANCO), XXI 853. (Richard), on the quadrature of the circle, XX 522

Surgeon, XX. 819 (Adams), his works on insects, IX

(John), on the sound produced by the fish Pogomas, XII 284 - Brethren, V. 317.

---- iron pyrites, XV. 115 ---- lead, XIII 301; VI 388--delete-rious effects of, XIV 484

- mountains, XX 790 - fish, XII 243 - River, XII 374—valley of, 373

Horse Hill, in Berkshire, IV 666 White-bait, fish, XII 236; IX. 764-of China, XII. 244.

Whiteboys, Irish, XII 492 WHITEFIELD (George), XXI 858-his separation from Wesley, XIV 693

Whitefrars' theatre, XXI 167
Whitehall, in London, XIII 671—Van
Dyck's proposal to complete the decoration of, XXI 522

WHITEHAVEN, in Cumberland, XXI. 855—coal mines of, VII. 577 Whitehorn (P) on gunpowder, XI 151. Whitehurst (Mr) on cohesion, VII 60,

61-on the pendulum, XXI 800. Whitehurst's machine, XII 173 WHITELOCKE (Bulstrode), XXI. 855.

General), fallure of his attack on Buenos Ayres, V 602; XVII. 781 WHITE SEA, XXI. 856; IX 385; XIX. White-throat, bird, XVI. 756

Whittings, in Wigton, XXI 856
Whiting, fish, XII 209, IX 764—fishery
of, 648—whiting pout, XII 209
Whitling, fish, XII 240.

Whitney (Mr), his tabular view of the metallic produce of the world, XV 248; and of its value, 249 (Mr Eli), his machine for cleansing

cotton, VII 447. WHITSTABLE, in Kent, XXI. 856 Whitsunday, why so called, IV. 424. Whittlesca-mere, XII 48

Whittlewood Forest, XVI 295 Whitworth (Lord), his conversation with Napoleon, V. 592, 593; X. 127—his account of Napoleon's behaviour at the

Tuillenes, ib.; V. 504.

on mechanics, XIV. 415, 416.

Whyda, sea-port in Guinea, XXI. 856. Whytock (Richard), his improvement of carpet manufacture, VI 272

WHYIT (Robert), physician, XXI. 856. Wiborg, in Finland, XXI. 857. Wichtyne, mineral, XV 86 Wick, in Carthness, XXI. 857; VI. 62-herring curing at, IX. 640, 642-herring

fishery, 635; XIX. 805. Wicker-work, IV. 487. Wick of lamps, XIII 170, 171, 172. Wickham (Mr), V 558

-(Mr), early notice of tea by, XXI

(Mr), on Hannibal's passage of the Alps, VI 293 n Wickliffe (John), XXI. 857. See Wy-

Wicklow, Irish county, XXI. 857; XII. 508, 515, 517

- town, XXI. 850. Wide, meanings of the word, VIII. 11.
WIDIN, Turkish city, XXI. 800, VII. 058.
Wiegnowiecki (M. K.), king of Poland, XVIII. 144

Wiedmann (C. R. G ), his works on insects, IX. 13 WIELAND (C. Martin), XXI 860, 718—poetry of, XVIII. 119—romances of, XIX. 290.

Wiesbaden, XXI. 860-mineral waters of, XV. 39. Wife. See Husband and Wife.

WIFFIN (J. Holme), XXI. 860. WIGAN, in Lancashire, XXI 861.

## WIG-WIL

Wigeon, bird, XVI 819; IX 762 WIGHT (ISLE OF), XXI 861—needles off the, XVI. 128—lighthouse, 1b—its remarkable geological phenomena, XVII.

Wigtown, Scotch county, XXI 863—agricultural statistics of, XIX 796, 797, 708-population, 799

town in Wigtownshire, XXI 864 Wilbeking (M), on iron binges, XII 582
Wilberforce (Wilham), XXI 864—his opposition to the slave trade, V. 528,

533, 538, 540, XX 321, 322
Wilcke of Stockholm, his experiments on the distribution of heat, I 761—on electricity, VIII 565-his theory of magnetism, XIV. 91

Wildbad, springs at, XV 37.
WILDE (Thomas), Baron Truro, XXI

Wild-fire, a disease of sheep, XXI 578. Wild-fowl shooting, XX 216 Wildman (Mr), his hives, IV 586—his

mode of managing bees, 587

WILKES (John), XXI 866-prosecution of, V 467-elected member for Middlesex, 470-Horne Tooke's intimacy with, XXI 308.

- (Benjamin), his works on insects, IX 6

- (Lieut ), his alleged discovery of an antarctic continent, X 178

WILKIE (Sir David), painter, XXI. 866; III. 717; XVII 80, 85—his opinion of the scenery of Kerry, XIII 73—on Volasquez and Murillo, XV. 694—en-gravings of his pictures by Raimbach, XVIII 799

—— (WILLIAM), poet, XXI. 867. WILKINS (John), XXI 807, XX 802—on a universal language and real character, I 46, II. 611—his intimacy with John Ray, XVIII 813

Wilkinson (Sir J Gardner) on the use of beer among the ancient Egyptians, V S18—on Egyptian carpet rugs, VL 269
—on a change of level in the Nile, VIII. 425-on the ancient Egyptians, 434-on the sacred annuals of Egypt, 489—on the population of Egypt, 444—on the Egyptan dynastos, 460—on the sunvershippers, 461—on hieroglyphics, XI. 400—his Ancient Happinans, 481—on Egyptian fishes, XII. 252, 260—on the vocal Memnon, XIV. 492.

Wilks, actor, XXI. 174

Will, XIV 582-freedom of, 618-St Augustine and Descartes' assertion of its freedom, I. 267 - Kant and Galiani's arguments for the same view, 196, 197 -Aristotle on its freedom, III. 565attributes of God in respect to, XXI. 191. See Free Will, Necessity, Volition.

Will-o'-the-Wisp, or Ignis fatuus, XII. 360; XIII 457; X. 409. Willammez (E. B.), Admiral, on the battle of Trafalgar, XXI. 724.

Willan (Dr Robert) on mortality in London, XV. 608.

Wille, engraver, VIII. 809. Willemite, mineral, XV. 100. Willesden farm, XIV. 808. Willet, bird, XVI. 805.
WILLIAM I. of England, XXI 808-his

visit to Edward the Confessor, VIII. 663—his conquest of England, 665—reign of, 666—death and character, 668 -Aldred's influence over, II. 458-effect of his conquest on the English language, IX. 793, 794-his invasion of Scotland XIX. 747—his navy, XVI. 93; XX 120—forest made by, 200.

— II of England, Rufus, XXI 808; VIII. 660—Scotland invaded by, XIX. 747—disputes between Malcolm and, 748-severity of his forest-laws, XX

- III. of England, XI. 575-steps preliminary to his invasion of England, V. 486—his landing, 487—appointed king, 439—bi4 favour to dissenters, ib.—his expedition to Ireland, 442; XII. 490; VIII. 218—altercations with

#### WIL-WIL

his subjects, V. 446-death and cha-

WILLIAM and MARY, proclaimed king and queen, V 439-reign of, ib -scheme for raising money by a Tontine, III 200—recoinage of silver, VII 78—act giving a bounty on the exportation of corn, 377-state of the com, 378-navy, XX 131: XVI. 93-household expenses of, XI 773, 774.

- IV king of Britain, XXI. 868accession to the throne, V. 658-history of his reign, ib -death, 665-act regarding the coinage in the reign of, VII 76 the Lion, king of Scotland, XIX.

II king of Holland, XI 575 - IV landgrave of Hesse, a cultivator of astronomy, III 798

OF MALMESBURY, XXI 868 See

Malmesbury.

of Nassau, prince of Orange, XI 563 et seq

of Newburg, XXI 868. - of Warham, XXI 868

OF WAYNFLETE, XXI 869. OF WYKEHAM, XXI 869 (Fort), at Calcutta, VI 69

WILLIAMS (John), missionary, XXI 671; XVIII 278, 279.

(John), on the ascending thunder-bolt, VIII 583

(Col), employed in the ordnance survey, XXI 881. (John), archbishop, founder of the

first public library in London, XIII · (Mr), on the population of China,

VI. 587 (Mr), on manufacturing ice in the

East Indies, XIV 646

— (C Wye), his plan for preventing smoke in furnaces, XX. 256, 257—on the combustion of coal, 633

-(Dr), on the annélides, XI. 291, 292 et seq —his experiments on earthworms, 301 — on the organisation of

centron, XV 380.

(General), his defence of Kars, XIII 53; XIX 511; XXI. 375.

(Roger), XIX 146

(Messrs), their smoke-consuming furnaces, XI. 721.

-(Mr), on vitrified forts, IX 790. Williamson (Dr), on the electrical eel, VIII. 575.

(Rev Mr), on the culture of the ranunculus, XI. 752

- (Captain), on tiger-shooting, XX

· (Messrs), their vertical steam engines, XX 611

Williamson's patent for grates, XX 354 Williamstown, in Victoria, XIV 478.
Willich (A. F. M.), quoted on Kant's

philosophy, I 191
Willing, XIX 111, 112 See Volition.
WILLIS (Thomas), XXI 872—his improvements in anatomy, II 762; and medical psychology, XIV 460.

on the brain as the seat of the

mental faculties, XVII 557, 578. - (John), his shorthand alphabet,

XX 675.

(Prof), on clocks, VII 16-his Principles of Mechanism, 36—on me-chanics, XIV. 384, 385, 391 et seq

- (Mr), his architectural nomenclature of the middle ages, XX 737 Willoughby (Sir Hugh), his arctic voyage, XVIII, 164.

- (Lord), IV. 429.

Willow, order of plants, V 207.

V 115; XVII 759, 764—used in basket-making, IV 487-cultivation of.

488, 489—its leaves used as a dye-stuff, VIII. 297—bark used in tanning, XIII 306-wood of, XXI 278; its strength, XX. 757, 758; specific gravity, XII 89.

Willshire (General), his capture of Kelat, IV. 640; XIII 58.

## WIL-WIN

Willsudæ, zoophytes, XXI 1001. WILLUGHBY (Francis), naturalist, XXI 872-his connection with Ray, XVIII 813-on fishes, XII, 205-on birds, XVI 726, 814

Willying machine, XXI 921

WILMINGTON, in Delaware, XXI 873 WILMOT (John), Earl of Rochester, XXI 878—converted by Bishop Burnet, V 792—on Shadwell XX. 68

(Sir J E E), governor of Tasmana, XXI 32 Wilmot's code of naval signals, XX 25

WILNA, XXI 873. See Vilna WILSON (Alexr ), ornithologist, XXI 873 -on American birds, XVI 730, 742, 746, 752, 762, 805

(Daniel), Bishop, XXI 874 (Florence), XXI 874

(FIGNENCE), ANI 874—his life of Cavendish, I 929 n 1, 931—on colourblindness, VII 154-on the poisonous effects of lead fumes, XIII 300-on the chemical changes of the human body, XIV 617

(HORACE HAYMAN), XXI 874

(JAMES), financier, XXI 875 (JAMES), naturalist, XXI. 876—hi work on the rod and gun, III 165 his works on insects, IX 20-his article Ichthyology, in the former edition of this work, XII 331, n

- (JOHN), Prof. of moral philosophy, Edinburgh, XXI 876-his arrangement with Hogg in reference to the Noctes, XI 558, n—on the individuality of Homer, 602, n 1—his literary connection with Lockhart, XIII 548—Elleray his residence in Westmoreland, XXI –Elleray, 843—elected professor of moral philosophy, XX 697—his poetry, XVIII. 127—novels, XIX. 282.

(John), on charr-fishing, XII 241. (Dr John), on the sinfulness of takıng interest, XII 429

-(John), of Amsworth, his improve ments in the cotton manufacture, VII

on hoar-frost, VII 769.

(Mr), on ship-building, XX 134,

(Dr), on Gennesareth, XVII 186-

on the animals of Palestine, 192

(Thomas), on insurance, XII 395. (Thomas), on iron bridges, XII 578, 579.

(RICHARD), English painter, XXI. 878, 388, 389; III 712; XVII 79 -(G. F.), on the uses of glycerine, X.

685 (Christopher), his life-boat, XIII

445. (James), execution of, X, 647. (Benjamin), on electricity, VIII.

529 —— (Captain), his visit to the Marquesas Islands, XVIII, 281.

(Dr), on the solar spots, IV 29 ——— (George), Sir James Macintosh's character of, VIII 241; I 393, n Willon, town in Wiltshire, XXI 878—

carpets, VI. 272. WILTSHIRE, or Wiltonshire, XXI 879 population and value of property, VIII. 754—Stonehenge (see that article) WIMBORNE MINSTER, town in Dorsetshire

XXI 879. Wimpfen, deposit of salt at, XIX 582.

Winchburgh cutting, Edinburgh and Glasgow Railway, XVIII. 760 Winchcombe (John), clothier, XXI. 914.

Winchelsea (Lord), his account of the lava of £tna, II. 196

(Lord), his duel with the Duke of

Wellington, XXI. 830
WINCHESTER, town in Hampshire, XXI. 880, XI. 203, 204-statute of, XVIII.

- College, XXL 880 WINCRELMANN (J. Joachim), XXI 880; XVII 524 on the Apollo Belvedere, III. 800—on Egyptian art, XVII. 47.

#### WIN-WIN

WIND, XXI 881, XIV. 647-law of rotation of, ib -velocity of, 651, XVIII 64-influence of its direction on the state of the atmosphere, XIV 677and land winds, 649, III 737; XVIII 77-waves caused by, XVII 581-winds 77—waves caused by, XVII 581—winds in the Mediterranean, XIV 470—tradewinds, XVII 614, 615—their influence on the plague, 751—connection of clouds with, VII 40—effect on the barometer, IV 459—in the polar regions, XVIII 177-effect of, on health, XIX 609-action of, on ships, XX 6, 7, 159-velocity and pressure, 21-winds in England, VIII 718; in Scotland, XIX 795, in Spain, XX 488, among the Himalayas, XI 442—mistral, in France, V 241; XIV 470—Vent de Bise, in France, X 241—hot winds in Australia, IV 291—Harmattan wind, XI 229, XX 271-strocco, XIV 470bora, ib —seste of Madeira, XIII 799 —skai, in Jutland, VII 747 See Atmosphere, Meteorology, Monsoons, &c , in horses, XI 642

Wind-sucking, a disease, XXI 565
WINDERMERE, lake, XXI 881, 842, XIII. 177—fish of, III 157 n, 158, XII 241. Windgage See Anemometer Windgalls, XXI. 558.

Windham (Mr), his opposition to the Peace of Amiens, V 585, 589—his act for the improvement of the army, 599.

- (General), XVI 308. Windings of rivers, XIX, 208. Winding of silk, XX. 281-machine for,ib Windischgratz (Prince), IV. 307, 308,

Windlass, XIV 415-differential, 401. Windmills, III. 706; XIV. 415—Coulomb

on. VII 462 Windows, III 488; X. 659-first use of glass in, 658 - painted glass, 660staned, 687—lattice or lead windows, 670—sills of, V. 740—sashes, 752—shutters, ib.—glazing, 756; X. 669—in Greek architecture, III. 456—rose, or Catherine wheel, 512—window tracery, in the middle ages, XX. 784—abolition of window-tax, V. 672

Windpipe. See Trachea WINDSOR, XXI. 881—railway to, V 722— Castle, IV 666

Soap, XX 366

- Castle, 11vor steam boat, XX. 666. Wine and Wine Making, XXI. 882—cooling of wines, VII 102, 103—carbonic acid in, VI 472-low, distillation of, VIII. 49-imports of, into the United Kindgom, 735—specific gravity of, XII. 80—adulteration of, II. 154; XIV 441—three classes of, IX. 759—British, 760—making of, 766—wine from raisins, XVIII. 799—clarification of, VI 755duties on French wines, XXI 60-effects of the increase of duties on, 72reduction of duties in 1825, ib.; and in 1860, 73—Champagne, XIV 312—Port, 1800, 75—Champagne, 217 512—20.0, XVI. 519—Tokay, XII 17; XXI 301; IV. 314—wunes of Austria, 314—Chile, VI 550—France, X. 247, state Chile, VI 550—France, X. 247, state of the wine trade of, in 1843, 219—Germany, 589—Georgia, XIX 551—Italy, XII 640—Hungary, 17—Madeira, XIII. 798—Spain, XIV. 107; XX 489—Lombardy, XIII 656—Massau, XV. 801—Portugal, XVIII 397—Marsala, XX. 246—Valdepanes, XXIII 510—Grane, XIII. 510 — Greece, XI. 16 — Johannisberg, XII. 789 — Würtemberg, XXI. 938 — Tuscany, 394-wine measures, 808. Winefrid (St) well, at Holywell, XI 593.

Wingate (E) on logarithms, XIII. 554 Wingaleld, South, manor house, VII

Wings of insects, IX. 89—of birds, XVI. 735; III 85, 92. Wing-shells, XV. 388

Winkler (Prof.) on electricity, VIII. 526. Winning of Collieries, VII. 119. Winnipisiogee, lake, XVI. 178. Winnowing Machines, II. 283. See Fanners

#### WIN-WOB

Winsford, salt at, XIX 582 Winslow (James B), anatomical labours of, II 764-on the sympathetic nerve, 815—on monsters, XV 508. — town in Bucks, V 722

Winstanley (Mr), his lighthouse at Eddystone, XIII 465

Winter-berry, XVII 762. Winter-green, order of plants, V 198 Winter-palace, Petersburg, XVII. 491 Winter's-bark, plant, V 180 WINTERTHUR, Swiss town, XXI 892 Winther (Christian), Danish poet, XIX.

695 Winton (Andrew), prior of Lochleven, XXI 892-quoted, VI 191.

Wintringham on venous tissue, II 793. Winzes, in mining, XV 224

Wire, annealing of, III 218-fusion of, by electricity, VIII 592—Wollaston's mode of making fine wire, XIV. 744—zinc wire, flexible and tenacious, III 219—brass wire deprived of tenacity by acid fumes or damp air, ib —in electric tele-graphs, XXI 95, 96—gold wire, X 703 wire-drawing, in the steam engine, XX 596

Wire cartridges, XX 214. Wire fences, II 270 Wire microineters, XIV 743, 745 Wire-Rope, XXI 892, XIX 414—rigging of, XX 23

Wire-worm, IX 105, 106 Wirksworth, town in Derbyshire, XXI.

WISBEACH, in Cambridgeshire, XXI 892; VI 33, 94 Wisby, Swedish city, XXI 892; X. 729

Wisconsin, one of the United States, XXI 892, 419—debt of, 428—wines of, 888—taxation in, 428.

Wiseman (Cardinal), V 672—on drainage of towns, III. 647, n.—on copying in architecture, 505, n -(Richard), on surgery, XIV. 461;

XX SIS Wishart (George), IV 530 Wisheart (Robert), bishop, X 646. Wishing, XIX. 111—laws of, 116. Wishar, in Germany, XXI., 894. Wissembourg, in France, XXI 894. WIT, XXI. 894; XVII 563. Witchcraft, III. 313, 315-belief in, IV. 462. n.—in Lapland, XIII 289

Witch-hazel, order of plants, V 195. WITHAM, river in Lincolnshire, XXI. 805; XIII 401 - Bridge, XII 583.

-(Mr), on the effect of a trap dyke on coal, XV. 189.

Withamite, mineral, XV. 85—optical properties of, XVI 607.
WITHER (George), Poet, XXI. 805.
Withering (Dr), on the effects of lightning, XVII 805.

VIII 585. Withorite, mineral, XV, 95. Withers of a horse, fistula in, XXI. 558. Witness, in the English Courts, VIII, 490—grounds of disqualification in, IX. 418, 419. See Testimony. WITNEY, in Oxfordshire, XXI. 896.

Wirsius (Hermann), divine, XXI. 896. Witt (John de), Dutch statesman, XXI. 896, 149; VII. 770; V. 423; XI. 576— on life annuities, XII. 395; 111. 220. Witte (Madame), her model of the moon,

IV. 89. Wittena-gemote, Anglo-Saxon national council, VIII. 665.

WITTENBERG, in Prussian Saxony, XXI. 896—form of worship altered at, XVIII.

Wittichite, mineral, XV. 121. Wittingen, wooden bridge at, VI. 884. WITTSTOCK in Prussia. XXI. 896. Wiveliscombe, in Somerset, XX. 411. Wivern, heraldic animal, XI. 384. Wladimir. See Vladimir. Wladimirsko (Theodore), XXI. 688.

Woad, culture of, in France, X. 248-used

in dyeing, VIII. 801. WOBURN, in Bedfordshire, XXI. 806—Abbey, IV. 569—drili, II. 274

#### WOC-WOL

Worke (M), his work on insects, IX. 23 Wodankies, mineral, XV 116

Woden, XV. 767-Wednesday dedicated to, I 458, n

Wodrow (Robert), XXI 897-on the character of Robert Baillie, IV. 372manuscripts of, XIII 401.

Wohlerite, mineral, XV, 91 Wokingham, in Berkshire, XXI 898 Wolcor (John), Peter Pindar, XXI 898

Wolchite, mineral, XV 120 Wolf (F. August), XXI 898-in Homer,

XI 599 et seq : XVII 525

quadruped XIV 163, XVII 632superstition in Oude regarding wolves,

Wolfart (Dr), his magnetical practice at Berlin, XX. 445—his works on magnetism. 444

Wolffe (Charles), XXI 898

— (JAMES), General, XXI 899—Quebec taken by, V 464, VI 159—killed in action, ib

WOLFENBUTTEL, in Brunswick, XXI 899 -library of, XIII. 421—palimpsests in, XVII. 209 and n

Wolff (J. Caristian Von) or Wolfius, XXI 899—merits of, as a philosopher and writer, I. 188—his futile attempts to introduce his philosophy into France, ib —his speculations on heat, 758—his Monumenta Typographica, IV. 706—on the Caraites, VI. 228-on hydraulics, XII. 180-on intuition and symbolical cognition, XIV 585, n. 4; 587, n ; 588, n. 1 and 2—quotation from his Psychologia Empirica, 587, 588—contents of his Psychologia rationalis and Cosmia generalis, 605, n 1—questions discussed by, ib, n 2—contents of his Theologia naturalis, 606, n 1-his notion of Cosmology, 605—his construction of telescopes, XXI 123.

F), his work on insects, IX 11 Wolf-fish. See Anarrhicas and Cat-fish Wolfram, XV. 66, 109

Wolfsbergite, mineral, XV. 119.

Wolga. See Volga. Wolgast, town in Prussia, XXI. 900. WOLLASTON (William), XXI. 900 - his theory on the foundation of moral

rectitude, XV. 555.

(T. V), his work on the insects of Madeira, IX. 24; XIII. 800.

-(Rev. Dr), on the solar spots, IV. 29 -his micrometer, XIV, 758.

(Rev. F.), his apparatus for de-termining heights by the ebullition of water, XI, 271.

- (William Hyde), XXI. 900—Huylaw of double refraction confirmed by, I. 901-on polarization in calcareous spar, 913—his reception of the atomic theory, 938—his contributions to electricity, 972; and other sciences, ib -compared with Sir H. Davy, ib.—his death, 973—his blow-pipe, IV. 790—his camera lucida, VI on the spectrum, I, 915, 922; XIII. 452; XVI. 587, 589 n, 594—his cryophorus, VII. 544—his mode of hardening steel, 600-on electrical light, VIII 546-on the oxidating and deoxidating powers of electricity, 593apparatus for the decomposition of water, 595, 596, 597—on inaudible sharp sounds, IX. 45-his mode of making fine wire, XIV. 744—his micrometers, 744, 761—his periscopic doublet and sphere, 772-another doublet, 774the illumination of microscopic objects, 795-on optics, XVI. 586, 580, 581, 583, his method of centering the lenses of an object glass, XXI 125his elementary galvanic battery, 611— his small galvanic battery, 626—on revolving magnetism, 638—on weights and measures, 799, 800 et seg.

Wollastonite, mineral, XV. 82. Wolsey (Thomas), Cardinal, XXI 901; VIII. 698-his disgrace and death, 700 -his efforts to revive Greek literature at Oxford, XXI, 454.

#### WOL--WOO

Woltmann's mill, XII, 143. WOLVERHAMPTON, XXI 901; XX. 530, 531-cheap clocks made at, VII. 16gun-locks made at, XI 100

Wolverine, quadruped, XIV. 156-fur of, X 349

Womb, or Uterus, III 71 Wombat, quadruped, XIV. 177; XXI. 31—dentition of, XVI. 449, 450

Women, of Afghanistan, II 206, of Albama, 444; Arabia, III 353-of ancient Athens, XX. 371-of New Caledonia, IV 266; New Zealand, 267; Austria, 319; Beloochistan, 642; Bogota, 811; Bolivia, 830; China, VI. 595, Circassia, 731 — Cochin-China, VII. 49; Congo, 246, Crete, 495; Dahomey, 620, ancient Egypt, VIII. 484, 440; modern, 444, 445; England, 781, 782; ancient Germany, VI 606; X 578—ancient Greece, VIII. 138; modern Greece, XI 14, Hindustan, 478; the Ionian Islands XII. 449, Japan, 690; Madeira, XIII 796; New Holland, IV 259, Sindh, XX. 306; Sparta, 503; North American Indians, IL 681; Bazeegurs, IV. 525; Loochoo islands, XIII. 691-introduction of women on the stage, IL 120; VIII. 161, 162; XXI 170—their pelvis larger than in males, III 13-their organs generation, 70-breasts, 72-mortality less than of males, 280—castration of, VI. 329—milk of, XV 11—baneful effects of indiscriminate intercourse in early youth, VI. 606-considered in relation to chivalry, 605 et seq : XIII 110, XVIII. 107—their character in the Greek drama, VIII. 134; as exhibited in the drama, 86, 87—dross of, XIV. 441—condition of, in factories, 280-condition of, in Mohammedan countries, XV. 304—respect paid to, in England and France, XX 79, n -suicides of, 799, 800-chact ments regulating their labour in factories, XXI. 790 — peculiarity in the physical conformation of Hottentot women, II 222 - dancing-girls, VII women, II 222—dancing-girls, VII 646, of Egypt, VIII 435, 443, 448—the Amazons, II. 660—size of heads, in new born females, III. 2—weight of female infants, ib.—bearded women, IV 520 punishment of scolds, V. 276: VI. 322 -concubinage, VII. 229-Shakspeare's female characters, XX. 86. See Bride, Chastity, Female, Marriage, Midwifery, Nursing, Polygamy, Pregnancy, Prostitution, Rape, Seduction, Sex

Wonder, sentiment of, XVII. 563. Wonder-turner, optical instrument, XVI.

Wood, or a Wood (Anthony), XXI 902on M Needham's newspapers, XVI 181
-on Selden, XX. 37-on the University of Oxford, XXI. 453, 455.

-(Lieut), on the Indus, XIL 378 (Mr), on the rate of speed on rail-ways, I 885.

(W.), his work on insects, IX.

14. (Dr Alexr.), his proposal for testing the common sense of surgeons, XX 821,

(Andrew), of Largo, XIX. 764. - (Robert), on the ruins of Basiliec, IV. 340

XXI. 902; V. 81—woody tissue, 09—strength of, VI. 249, XX. 170, 171, 172, 757, 779—diseases of, and modes of preserving, V. 178 (See Dry Rot)— bridges of, VI. 882—charcoal of different kinds of, 421-various senses in which the word is used, VIII 12-engraving on, 799 (See Wood Engraving)—shrink-ing of, XII. 816—curving of, ib.—effects of the weather on, ib.-kinds most used in joinery, 817-as fuel, X 817-in landscape gardening, XVII. 771—turning of, XXI. 390. See Carpentry, Joinery, Planting, Shipbuilding, Timber,

Woodard (Captain), his account of a case of severe abstinence, VIII 22.

#### W00-W00

Woodbridge, town and river in Suffolk, XXI 902.

Wood-bugs, IX 161.

Wood-cuts, printing from, XVIII 548--stereotyping of, 551

Wood-cutters of Canada, VI. 142. See Lumbering.
Wood-cock, IX 763, XVI, 802—shooting

of, XX 224

Woodcroft (Prof. B), on steam naviga-tion, XX. 636, n—his screw propeller, 658

WOOD-ENGRAVING, XXI. 902; VIII, 799 Wooden pavement, XIX 227 Woodhead railway tunnel, XVIII. 761. Woodhouselee (Lord) See Tytler (A F ) Woodley (Mr), his ascent of Mont Blanc,

II 627. Wood-lice, VII. 543

Woodpecker, XVI 774. Wood-pigeon shooting, XX 216 Wood's comage in Ireland, XII. 493, 527.

Woods (Dr), his photographic process, XVII. 551.

Wood-sorrel, order of plants, V. 187. plant, V 188.

Woodstock, in Oxfordshire, XXI 904 gloves manufactured at, X 682 Woodville (Dr) on small-pox and cowpox, XXI. 500.

WOODWARD (John), XXI 904.

- (Mr), his manual of mollusca, XV 328-on the Veneridae, 850-on the Hippuritidae, 349—on Gastrochoena modiolina, 350—on sea-hares, 272—on the Lumnerdae, 874 - on operculated land snails, 375—on limpets, 579.
Woodworth (J. C.), his works on insects,

Woo-e-shan, Bohea tea hills in China,

XXI 84, 85. Woof, XXI. 780 See Warp Woot, AM. 780
Woot AND Woot EADS, XXI 905; IL
353, 354; XIV 183, 212—wool of Australia, IV 288, 292, 299; Cashmere, VI.
309; Canada, 147; Spain, XX. 489;
Saxony, XIX 684, 685—Tibet, XXI.
247—Russia, XIX. 542—wool manufactures of Hawick, XI. 246; Galashiels, X. 368-probable cause of wool curling, XI. 182—its exportation prohibited, II. 262: V 527—law of Henry V. regarding foreigners buying wool in England for exportation, VII. 77—bleaching of, IV. 769—Dr. Young's instrument for measuring the fineness of, VI. 651dyes botter than cotton and linen, VIII. 274, 277-structure of, 274-felting of, -fulling of, ib.-importance of, ib -scouring of, ib. -dyeing of, ib. method of dyeing it red, 288; yellow, 297; blue, 302, black, 805, brown, 308, 297; blue, 302, blace, 500, 517, 313; green, 209; violet, purple, &c., 211 · orange 313; grey, &c., ib.—value of imports of, into Great Britain and Ireland, 735 - imports from Cape of Good Hope, X. 715. See Sheep. Wool-hats, XI. 240, 241.

WOOLLEN AND WORSTED MANUFACTURES, XXI. 913-of Ayrshire, IV. 333-Donmark, VII. 747 - Devoushire, 764-Derbyshire, 755—England, VIII 728— France, X. 251—Germany, 590—Gloucestershine, 681—Holland, XI. 583— Illinois, XII. 362—Ireland, 492, 519— Scotland, XIX. 805 — Pennsylvania, XVII 396—Philadelphia, 510—Persia, 424—Spain, XX. 490—Somersetshire, 410—Yorkshire, XIV. 287; XXI. 958— Tipperary, 287—Tyrone, 408—Wiltshire, -Wisconsin, 894-value of imports of into United Kingdom, VIII. 735; of exports, 736-salubrious nature of woollen manufacture, X. 868—calendering of woollen goods, VI 91, 92—card, 281. Woolen, town in Northumberland, XXI.

QUR

Woolhope limestone, XV. 198. Woolhouse on the satellites of Jupiter, IV. 91-on comets, 94.

Wooll (Dr), his Life of Wurton, XXI. 788. Woollet, his engravings, VIII. 808. Woolley (Rev. Joseph), his rule for cal-

#### WOO-WOT

culations in shipbuilding, XX. 145rule for determining the time of oscillation, 157-his descriptive geometry, 184

Woolston (Thomas), XXI. 926

Woolwich, XXI 926, XIII. 67—Royal Military Academy at, II 71—testing of cannon at, VI. 180-dockyard, VIII. 80 -ropery, 81 Wooralı or Woorari, poison, XIV. 438;

XVII 702.

Wootz of India, VII. 601-1ts value in cutlery, 600, 601. WORDESTER, XXI 926—battle of, V 415

-early newspapers of, XVI. 186-porcelam works, XVIII 437
—— College, Oxford, XXI, 459.

(Marquis of), steam-engine invented by, XX 574, 577-his experiment of heating water in a close vessel, 557 - (FLORENCE OF), historian, XXI.

990

(WILLIAM OF), chronicler, XXI 929

Worcestershire, XXI 927-additions to the county of, VIII 719-population and value of property, 754—salt produced m, XV. 247—woollen manufactures of, XXI 914

Worde (Wynkyn de), printer, XVIII 584, 536—his types, XXI. 401—on the dis-like of spirits to bells, IV. 629.

Words, the signs of ideas, X. 745. See Language, Speech.

Wordsworth (William), XXI. 929—on fancy, XVIII 93—character of his poetry, 126—recalled our poetry to truth and nature, XV. 23—on Ossian, XVII 7-his connection with Coleridge, VII 109-Jeffrey's criticism on, XII. 717.

(CHRISTOPHER), XXI. 929. Work, in mechanics, XIV. 403. Workhouses, XVIII. 311, 314—first pro-

vided in Paris, 185.
Working machines, classified, XIV. 415.

Workington, in Cumberland, XXI. 932—coal-mines of, VII. 577.
Working and their employers, laws re-

lating to, XIV. 346

Works of God, XXI 195.

Worksop, in Nottingham, XXI. 932. World, map of, X. Plates-on Mercator's projection, Plates—chart of, showing magnetic curves, XIV. 60—produce of gold and silver in different parts of the. XVIII. 463. See Earth, Geography.

Worm (Olaf), physician, XXI. 932. of a still, VIII. 47, 49.

of the dog, III. 100. Wormian bones, III. 21.

Worm-like serpents, XIX. 55. Worm-shells, XV. 888.

Worms, red-blooded, XI. 290 -- earthworms, 301—ship-worm. See Teredo. —— (intestinal), XXI. 974—obscurity of their origin, 975, 976 et seq. ; III. 175-diseases produced by, XXI. 977; XVII. 691-reproduction of, 688-in the domestic animals, XXI. 569, 578-worm powder recommended by Dr Alston, II. 630.

Worms, German city, XXI. 932-diet at,

in 1521, XIII 727
Wormwood, plant, V. 107.
Worship, public, XIX. 563—due to God, XXI. 196; to Christ, 209—as a means of grace, 219-places of worship of every religious body in England and Wales, VIII. 745; in Scotland, XIX. 801. See Devotion.

Worsley, canal from, to Manchester, V. 367.

Worsted manufacture. See Woollen and Worsted Manufacture Wort, in brewing, V. 825, 837-distilla-

tion of, VIII. 48, 49. Worthies of Surrey, XX. 837-of Sussex,

840. WORTHING, in Sussex, XXI. 988.

Worthite, mineral, XV. 86. Worron (Sir Henry), XXI. 983—on ang-ling, III. 147—the first who used the

#### WOT-WUT

erroneous phrase, "Gothic architecture," 447 — his conditions of building well, 490, n - Walton's Lafe of,

WOTTON (William), divine, XXI 933-his work on ancient and modern learning.

Wounds, death from, XIV 431—surgical treatment of, XX 822—pensions for, XVI 120

WOUWERMAN (Philip), Dutch painter, XXI. 983, XI 591

Wrangel (General), XX. 848, 852

(Baron), XVII 515, 583—on the winds of the polar regions, XVIII 177 Wrangel's volcano, XVII 590, 645 Wrath (Cape), XX 841

Wiay (Leonard), on the supply of timber XX. 173, 174—on teak timber, XXI 277, green-heart timber, 1bsugar-bearing plant, imphee, XX 798—his estimate of the supply of wool, XXI

Wreath, in heraldry, XI 337. Wreck-chart of the British Islands, XIII. 446-wrecks of British merchant vessels, XX. 28 See Shipwreck

Wreckers, in the Bahama Islands, IV 367.

Wrede (Baron Von), on optics, XVI. 666
—his visit to Hadramaut, III 356

WREN (Sir Christopher), XXI 938-his knowledge of the balance of arches, III 406, 408—his domevaultingin St Paul's, 414 — character as an architect, and works of, 454, 455-his scheme for rebuilding London after the great fire, 496—centres employed by, VI. 373—his roof of the theatre, Oxford University, XIX 386—school of masonry formed by, XX 711—St Paul's designed by, XIII. 670—his monument, ib See Paul's (St)

- bird, XVI 756

Wrestling, XI 170 WREXHAM, town in Denbushire, XXI 937—church of, VII 736. Wright (Edward), X 495, 505—on loga-

rithms, XIII. 553—on navigation, XVI

(Mr), his apparatus for estimating (Thomas), on the milky way, I 844 and n. 2

the calorific value of coal, XX, 631. Wrist, bones of the, III 32-joints, 34-

muscles, 98.
Writ, in Law, XXI 997.
Writers to the Signet, VI 764—in Edinburgh, VIII. 395—their library, ib; XIII 402

WRITING, art of, XXI. 937-origin of alphabetic, II. 606—phonetic system, 607—was it known in Homer's time? XI. 598-hieroglyphic, hieratic, and demothe systems of, 369—Astle on the origin and progress of, II 612; IV 706—writing in cypher, VI 728—among the Hebrews, XVII 401-short-hand, XX 675; II. 551 (See Stenography) — remarks on written characters, I. 66, 67. See Alphabet, Characters

Wrongs, private, English law regarding, VIII. 783

Wry-neck, bird, XVI 777.

Wulffenite, mineral, XV. 106
Wulff (C R), his work on insects, IX. 22 Wunch (Prof.) on the spectrum, XVI

Wurmser (General) X. 81 et seq. ; XV. 787 et seq.

Wurno, African town, XI 778; XIX 564,

WURTEMBERG, XXI 937-army of, III 652-its obligations to Bilfinger, IV. 722-coins of, XV. 442, 445-monarchy of, 414—postal system, XVIII. 424 weights and measures, XXI. 814 Wurtz on animal magnetism, XX. 424

WURZBURG, Bavarian city, XXI 940; IV 518—university of, XXI, 492.

WURZEN, town in Saxony, XXI. 940. Wutzer, on nervous ganglions, II. 806,

### WYA-XEN

Wyandotte cave, in Indiana, XII 375 WYATT, family so named, XXI 940 (BENJAMIN), architects, XXI 940 (Charles), on the invention of the spinning machine, XX 509

(JAMES), architect, XXI. 940. (John), on roller spinning, XX 509, 510

(L. WILLIAM), architects, XXI (M COATES), sculptor, XXI 941 941

(MATTHEW DIGBY), XXI 941. (RICHARD JAMES), Sculptor, XXI

(SAMUEL), architect, XXI 940 (Sir Thomas), insurrection of, VIII 708.

(Sir T), poetry of, XVIII 121—sonnet on, VIII 796

- (Thos Henry), architect, XXI. 941 Wyatt's patent slating, V 745-improve-

ments in joinery, XII. 805 WYATVILLE (Sir Jeffrey), XXI 941 WYCHERLEY (Wilham), XXI 941, 171-dramatic works of, VIII 163

Wychwood forest, XVII 36
WYCLIFFE (John), XXI 944; VIII 686 his translation of the Scriptures, IV 702, specimen of that work, VIII 795 —the English language improved by, VI 434—at Oxford, XXI 454—Tytler's Lafe of, 414

WYCOMBE (Chipping or High), town in Bucks, XXI 947

WyE, river, XXI 948; V. 312; XI 349; XV. 498, XVIII 748

river in Derbyshire, VII 754 Wyley (Andrew), on dolomite rocks, XV 152.

Wyman (Prof ), on fossil reptiles, XVII 136

WYMONDHAM, town in Norfolk, XXI. 948
—mediæval roof at. XIX. 892. WYNDHAM (Sir William), XXI 948

— (Right Hon. William), his administration, V 546—his alien bill, ib—his Act for the preservation of the person of George III, 558—his reply to the French ambassador, 546; and to Bonaparte's letter to George III , 569. See Grenville (Lord)

Wynkyn de Worde See Worde (Wynkyn de).

WYTTENBACH (Daniel), philologist, XXI. Wyvis (Ben), Scottish mountain, XIX 426

# $\mathbf{X}$

X, letter of the alphabet, XXI. 949-in abbreviations, II. 21

XALAPA, town in Mexico, XXL 949; XIL 671.

Xanthichthys, genus of fishes, XII. 313. Xanthin, VIII. 282 Xalisco, in Mexico, XXI. 949. Xanthippe, XX. 376, 377. Xanthippus, Lacedemonian, VI. 289. Xanthite, mineral, XV. 85. Xanthokon, mineral, XV 122. Xanthornus, genus of birds, XVI 762

Xanthoxylaceæ, nat. order of plants, V. 189. XANTHUS, city in Lycia, XXI 949. - river, XXI. 949; XIX. 688 XAVIER (Francis), missionary, XXI 949—introduced Christianity into Ceylon, VI.

897-an associate of Loyola, XII. 751his appearance in Japan, 697.

de Maistre (Count), on water-spouts, VIII 586. - (Silva), his conspiracy in Brazil, V.

285. Xenagoras, geometer, X. 467. XENOCRATES, philosopher, XXI 949 Xenodon, genus of serpents, XIX. 55. Xenolite, mineral, XV. 86. Xenopeltis, genus of serpents, XIX, 53.

XENOPHANES, XXI. 950—philosophy of, VIII. 522, XVII. 232.

### XEN-YAR

XENOPHON, XXI 950-his Anabasis. II 743-his account of Cyrus, VII 612; XV. 807-his retreat with the 10,000, VII 613-on field sports, XII. 31-not mentioned by Plato, XVII 791—his notice of the ruins of Nineveh, XVI 273-his commendation of agriculture, XVIII. 235, n. 2-his account of Socrates' manner of teaching, XX 374his admiration of that philosopher, 379 -his Memorabila of Socrates, 396, 401, 402

of Ephesus, XXI 950 Greek surgeon, XX 811. Xenops, genus of buds, XVI 768. Xenos, genus of insects, IX. 220. Xenotime, mineral, XV. 94. XERES, O1 JEREZ DE LA FRONTERA Spanish city, XXI 950—battle of, XX. 460—wane of, XXI 884 See Sherry

Xerxes, king of Persia, XVII 434—his invasion of Greece, IV 199; XX. 500 effects of that invasion on Athens, IV. 160—subdues Egypt, VIII. 465

Xestorrhytias, fossil reptiles, XVII 139 XIMENES DE CISNEROS (Francisco), car-dinal, XXI 951; XX. 468—his polyglott Bible, IV 497

- on hydraulics, XII 144, 145 Xingu, river, V. 292. Xiphias, genus of fishes, XII. 205, 297.

Xiphodon, genus of fossil mammals, XVII. Xiphoïdei, family of fossil fishes, XII 346. Xiphophorus, genus of fishes, XII. 252

Xiphopterus, genus of fossil fishes, XII. 246 Xiphostoma, genus of fishes, XII. 247

Xiphorynchus, genus of fishes, XII 247. Xiphydria, genus of insects, IX. 184. Xolotl, Mexican king, XIV. 699. Xondes, insects, IX. 188. Xyela, genus of insects, IX. 184. Xylobalsamum, IV. 401 Xylochor, mineral, XV. 76. Xylocopa, genus of insects, IX. 190. Xylophaga, genus of mollusks, XV. 352. Xylophagi, insects, IX. 142, 230. Xylophagus, genus of insects, IX. 230. Xylophili, insects, IX 121. Xylophilus, genus of insects, IX 138, Xylota, genus of insects, IX 239 Xylotomæ, family of insects, IX. 232.

Xylotrogi, family of insects, IX. 112 Xyrichthys, genus of fishes, XII 267. Xyridaceæ, nat older of plants, V. 213. Xysta, genus of insects, IX. 147.

 $\mathbf{Y}$ 

Y, letter of the alphabet, XXI. 952. Yablonoi Mountains, XX 537. Yacht clubs, benefits resulting to ship-

building from, XX. 139-the Titania and America yachts, 164.

Yack, or Yak, in zoology, XIV 215; III 740—in India, XI. 455—Tibet, XXI

Yacous, birds, XVI 785 Yafa (El), in Arabia, III. 356. YAKUTSK, in Asiatic Russia, XXI. 952— temperature at, XVIII 178—climate,

XIX. 519—population, 521.
Yale College, VII. 295; XVI. 175—library of, XIII. 429.
Yale's lock, XIII. 546. Yam order of plants, V. 210.

YANG-TSE-KIANG, Chinese river, XXI. 952; XVII. 647. Yani, XX. 51.

YANINA, XXI 952; II. 443. Yapura, river, V. 292.
Yard of a ship, XXI 952.

standard measure, XXI. 799, 803.
Yare, river in Norfolk, XVI. 289; XX.

790; XXI. 958. YABRAND, XXI. 952.

YARMOUTH, in Norfolk, XXI. 952; XVI. 290—herring fishery at, IX. 642 and n. 1-bloaters, 643.

## YAR—YOR

Yarmouth, in Isle of Wight, XXI 861 Yaın, cotton, prices of, VII 446-linen, XIII 495 See Cotton Manufacture, Linen, &c

Yaropolk, XIX 470

YAROSLAV, XXI 953; XIX 471. Sec Jaroslav Yarra-Yarıa, Australian river, XIV 477,

YARRELL (William), XXI 953-on fishes. XII 230, 253, 269, 271, 284, 290—on mackerel, IX 645—on British birds, XVI 733.

YARROW, river, XXI 953, XX 41. YASSY, XXI 953 See Jassy

Yates (M1), his vindication of Socinianism, XXI 208.

- (Thomas P.), his work on insects. IX 6.

Yawl, IV. 800

Yeadell (Thomas), on moles, XXI. 547, n 1, 2, 3, 4

Year, astronomical and civil, VI. 76 solar, 1b.-leap, 77-Roman, 1b, 666lunar, 79-Grecian, ib -Mahommedan, 1b, 673 — Hindu, 353, 676— Olympic, 665—Jewish, 669—Egyptian, III 783; VI 670; VIII 449, 450-Chinese, III 784; VI. 665-Druidical, VIII 186new-year festival, in China, VI. 570-new-year's gifts, X 622-confusion of civil with ecclesiastical, XVIII. 320, n

2. See Astronomy, Chonology Yeast, XXI 953; VI. 441—its use in baking, IV. 380; in brewing, V 228; in distillation, VIII 49-nature of, V. 328-yeast plant figured, 68.

YEDDO, or Yedo, Japanese town, XXI. 953. See Jeddo YELL, Shetland island, XXI. 953, XX.

113. Yellow, colour, varietics of, XV. 59—dyeing of, VIII. 295, 318—for printing, XVIII. 556.

fibrous system, in anatomy, II.

RIVER, in China, XXI. 953 SEA, XXI 953; XVII. 574, 577. Yellow-earth, XV. 83.

Yellow-fever, Dr Rush's treatment of, XIX. 466

All. 406
Yellowly (Dr), on the gastric mucous membrane, II. 837.
YEMEN, XXI 953; III 341 ct seq.
Yenikalé, IV. 744; VII. 505—Strait of, IV.

Yenisei, or Yenisay river, XIX. 548; XVII 605, 647; XXI 951. YENISEISK, in Asiatic Russia, XXI. 953;

XIX. 521. Yenite, mineral, XV. 90.

Yeomen of the Guard, XI. 775-institution of, VIII, 694 Yeou, river, V. 51.

YEOVIL, in Somersetshire, XXI. 954—glove-making at, XX. 410; VIII 731. YESSO, Japanese island, XXI. 954; XII. 880

Yew order of plants, V. 209.
Yew-tree, XVII. 787, V. 209—use of its wood, XXI. 278—specific gravity of, XII. 89—age of, II. 285—large trees, XXI. 278—Irish yew, IX. 516.
Yezo, Persian city, XXI. 954.

Yezdijird, king of Persia, XVII. 436.
—— era of, VI 674

Yoldia, fossil mollusks, XVII. 106. Yolofs, or Jolofs, African tribes, II. 221, XX. 50, 51.

YONNE, in France, XXI. 954. YORK, XXI. 955—archbishop of, III. 423
—archbishopric of, VIII. 748—a county

of itself, 721-lodge of free-masons at,

—— (Duke of), Lord High Admiral, under Charles II. VIII. 85.

- (Frederick, Duke of), his marriage, V. 540-his campaign of 1794, 554-his expedition to Holland, 568, 572, 578his connection with Mary Ann Clarke, 605—vested with the custody of the king's person, 628—his declaration against the Catholic claims, 642.

#### YOR-YOU

York Minster, XXI. 955; III. 447, 481, 482, 517—great bell of, IV 629—stained-glass windows, X. 668—hbiary of, XIII 395. in Upper Canada, VI. 145.

(New) See New York. paving stone, XX. 711

and Lancaster, wars of, VIII 690. YORKSHIRE, XXI. 956—woollen and worsted manufactures of, VIII. 728; XIV. 287; XXI. 916, 917 et seq —wages of woollen manufacturers in, 919—flax trade of, XIV. 288—great oak in, XXI. 270 population and value of property in, VIII 754

Youatt (Mr), his microscopic examination of wools, XXI. 905 - on veterinary science, 574, 575

Youghal, Irish town, XXI. 960

Young (Adam), his fire-escape, XIII 438. (Andrew), on the time when parr become smolts, IX 592—on the salmon of the river falling into Dornoch Firth, 598-on the conversion of smolts into grilse, 596 and n. 1; and of grilse into salmon, 597.

(ARTHUR), XXL 960 - on small farms, VII. 428-on small estates, 432 on the war against cottages in England, 434-on the excise, IX. 449, XXI 59-on the population of Iteland, XII. 508; on the climate of, 504-his description of Coalbrook Dale, XX. 230-on the soil of Tipperary, XXI. 33

- (Brigham), Mormonist, XV. 591troops sent against, XXI 498

- (Charles), actor, XXI. 176 - (EDWARD), XXI 960—his dramatic works, VIII. 164-his poetry, XVIII.

(Sir Henry), governor of Tasmania XXI. 33. (Sh H. E F.), his reports on South

Austraha, IV. 207. - (James), surgeon, XX 818. - (James), his galvanic battery, XXI.

613.

(Or Matthew), on capillary attraction, XII 91, 95, 97—his experiments in hydraulics, 147.

(Thomas), XXI. 961—his early education and attainments, I. 898 residence at Edinburgh, 894 - character of his investigations, ib.—his lectures on Natural Philosophy, ib .- on the undulatory theory of light, 896-his criometer, 897; table of substances measured by, XIV. 760-on interference of light, I. 897; diffractive bands of, ib .- opposition to his views, 898-on the rainbow, ib.; XIV. 679 - his anonymous researches, I. 900-his articles in the Quarterly Review, ib.; and in the Encyclopædia Britannica, ib.-connection of his optical discoveries with those of Fresnel, ib -on the physiology of vision, ib.on hieroglyphics, ib; II. 607-his method of interpreting the ancient Egyptian characters, XI. 377-on the inscriptions of the Rosetta stone, 378-on the character of Egyptian monuments, 404 -his character, personal and philosophical, I. 782, 901, XI. 408—his death, I. 901—Bunsen's criticism on, XI. 408—his theory of the tides, I 818-on the tides, XXI. 250-article on Tides in this work L 819; XXL 249, n—his Life by Dr Peacock, L 818—his solution of the principle of capillary attraction, 732on the Egyptian language, XIII. 218on the affinities of language, 197-misled by a table in Morgans on Life Assurance, III. 228-on aurora borealis, IV. 249-on bathing, 501, 502-his introductory observations to the article Carpentry in this work, VI. 249 and n.on chromatics, 643 et seg.; his article Chromatics in this work, XVI. 586-on cohesion, VII. 57 ef seq.—on dew, 768—lectures of, 668—on light, XIII. 450, 453; XVI. 598—on optics, 586, 546, 547, 607, 628 et seg.—on the spectrum, 592—on the eye, 694—his formula representing the law of the pressure and tempe-

#### YOU-ZAN

rature of steam, XX. 565 — on the strength of iron pillars, 178 — on the pendulum, XXI 800-on the laws relating to weights and measures, 801, his article on, in former editions of this work, 807 Younger (John), on salmon fishing in the Tweed, IX 614, 615. Youth, XIV. 425—as a bar to capital

punishment, 445.

Youze, in zoology, XIV. 169

Ypanema, in Brazil, iron-works at, V. YPRES, in Belgium, XXI 966-lace of,

XIII 143-poor-law of, XVIII. 300, n Ystwith, river, VI 234 Yssel, river, bridge over, XII. 598. Yttria, XV, 65

Yttrium, XV. 488

Yttrocerite, mineral, XV 93 Yttrotantalite, mineral, XV. 110. Yttrotitanite, mineral, XV. 91 Yttroilmenite, mineral, XV. 109. YRIARTE (Thomas de), XXI. 966. YRIEIX (St), town in France, XXI 966. YSSENGEAUX, town in Flance, XXI 966

YSTAD, town in Sweden, XXI 966 YUGATAN, XXI 966; XIV. 726, 718— runed cities in, IL 697—architectural remains, III. 502

Yugs, Hindu eras, XII. 788. Yuma language, XIII 221 YUNNAN, in China, XXL 966. Yunx, genus of birds, XVI. 777. Yupanqui, Inca, VI. 552 YVERDUN, in Switzerland, XXI. 966. YVETOT, in France, XXI. 966. Yzer, river, IV. 611.

Z, letter of the alphabet, XXI 967 ZAANDAM, town in Holland, XXL 967 Zabrus, genus of insects, IX. 90. Zabulun, tribe of, XVII 192.

ZACATECAS, Mexican state and city, XXL 967; XIV. 726, 718.

Zacatula, in Mexico, XIV. 723. Zacchia (Paulo), on medical jurisprudence, XIV. 423.

ZACCHARIÆ (K. Salomon), German jurist,

XXI. 967. ZACH (Baron Von), XXI. 967; I. 835, 834, n. 3—his laughable mistake about Sche-

hallien, 834 n. 2-his astronomical publications, III. 813, 814—his catalogue of stars, IV. 80-on the motion of the stars, 81-on the number of, 82, 83his interview with Mezzofanti, XIV. 732

Zagrab, or Agram, II. 244. Zahara, See Sahara,

Zainer (Ginther), early printer, XVIII.

Zaire, river, VII. 247. Sce Congo. ZALEUCUS, Locrian legislator, XXL 967. Zaluski library, XIII. 425. Zama, battle of, VI. 299; XIX. 311.

Zambeccari's balloon, IL 178.

Zambest, African river, XXI 967; IL 214; XV.669; XVII.608—Falls of, 601,

Zamboni (Prof.), his dry pile, XXI. 619.

Zambos, XIV. 719. Zamfra, African country, XI. 778. Zamorano (Roderico), on navigation, XVL

Zanclus, genus of fishes, XII. 300, 802fossil, 344.

ZANESVILLE, in Ohio, XXI. 967; XVI. 490-canal, ib. Zanfara, in Houssa, XL 776, 728. See

Zamfra. Zangeia, in Houssa, XI. 779. Zannone, island, XVIII. 298.

Zanotti (M.), electrical experiments of, XXI. 635. Zansz (Zacharias), inventor of the com-

pound microscope, XIV. 763. ZANTE, XXI. 968; XII. 453. Zantedeschi (Prof.), on solar magnetism,

#### ZAN—ZIN

XIV 13; XVI 596-on the lines in the spectrum, 592 ZANZIBAR, XXI 968, II 228. Zaphientas, fossil corals, XVII. 97. Zapolya (John), king of Hungary, XII

Zara, Austrian city, XXI 968 Zaragoza. See Saragossa. Zaria, XI, 778. ZARSKOE-SELO, Prussian town, XXI. 968.

Zastrow on fortification, IX. 837. ZEA, XXI. 968 See Coos

Zeagonite, mineral, XV. 77
ZEALAND, Danish island, XXI. 968; VII 745, 346-manufacture of hnen in, 747 province, XXI 968.

(NEW), XXI 968 See New Zealand. Zebro, Arabian city, XXI 968. Zebra, XIV 202; II 217.

Zebia-wood, V. 190 Zechariae, the prophet, XXI. 968 Zechstein formation in geology, fossil fishes of, XII. 348-350, 352.

Zegzeg, XI 776, 778, 779 Zeidæ, family of fishes, XII. 299. Zeihers' burning mirrois, VI 11, 12 Zeitun, town in Greece, XIII 303. ZEITZ, Prussian town, XXI. 969. Zell (Ulric), printer, XVIII. 526
—— in Styria, XIV. 303.

ZELLE, town in Hanover, XXI 969. Zeller (P. C), his work on insects, IX. 23. Zelus, genus of insects, IX. 163. ZEMBLA (Nova), XXI 969. See Nova

Zemindars, IV. 649; XI 513, 518.

Zemlin, Austrian town, XX. 43. Zendavesta, III. 259; XIII. 208 Zend language, III 747; XIII. 208— study of, XVII 529—Rask's disserta-

tion on, XVIII. 808. Zenith, IV. 1. Zenith-sector, by Ramsden, XXI. 331,

335; by Alry, ib. Zeno of Ella, XXI 669.

the Stoic, XXI 970—character of his philosophy, I 319. See Stoics.

Roman emperor, VII 311.

ZENOBIA, queen of Palmyra, XXI 970; XVII 221; XIX 349—her invasion of Egypt, VIII. 473-instructed by Longinus, XIII. 685—defeated by Aurelian, XI. 318,

Zenta, battle of, XXI. 370. Zeolites, XV. 75—of Glen Farg, XVII.

ZEPHANIAH, the prophet, XXI 970. Zephyrius, genus of insects, IX. 208. Zephyrus, XXI. 971. Zerbis (Gabriel de), II. 756.

Zernst (dashitation, XXI, 971.
Zernsanaya, river, VII. 627.
Zerubhabel, XII. 732, 767—temple of, 742.
Zerland, XXI. 971. See Shetland. Zetterstedt (J. W.), his works on insects, 7X. 10

Zeuglodon, genus of fossil whales, XVII. 166-teeth of, XVI. 445. Zeus, genus of fishes, XII. 299-fossil, 345. Zeuss (J C.), on the Celtic, XVII. 530. Zeuxia, genus of insects, IX 240. Zeuxis, Greek painter, XXI. 971—paint—

ings of, XVIL 54 Zeuxite, mineral, XV. 89. Zeuzera, genus of insects, IX. 212.

ZHUKOVSKY (V. Andreevich), Russian poet, XXI. 971. Zibelline, in zoology, XIV. 157.

Ziegler (Jo. Henrico), his experiments on the force of steam, XX. 557. Zieza, Spanish town, IV. 722.

Zimisees (John), XIX. 470.
ZIMMERMANN (J. Georg), XXI. 971—on the compressibility of water, II. 102; XII. 77-on the diversity of the human complexion, VII. 225.

Complexion, VII 220.

(C.), his work on insects, IX. 17.

ZING, XXI 971; XV. 66—mines, 246—imports of, ib.—in chemistry, VI. 491, 488—changes in its texture produced by wiredrawing, &c. III. 219—sulphuret of, IV. 772—its compounds with copper, V. 277; VI. 497—crystallisation of sulphuret of,

#### ZIN-ZUM

VII 563-specific gravity of, XII 88poisonous quality of, XIV. 434—distri-bution of, XVII 622—in Persia, XVIII. 668—as a covering for roofs, XIX 374 -cohesion of, XX. 757-diamagnetism of, XIV. 31

Zinc red, XV 112 Zinc-blende, XV 121. Zinc-bloom, XV, 100. Zincite, mineral, XV. 112. Zınckenite, mineral, XV. 119. Zincography, XIII. 512, XXI 336. Zinghis-Khan. See Genghis-Khan. Zingiberaceæ, nat. order of plants, V. 211 -region of, 228; XVII. 628.

Zinn (J. G.), anatomist, II. 765 ZINZENDORF (N L), Count of, XXI 971; IV. 813—Wesley's visit to, XXI 835 Zion, or Sion, XII. 737-Episcopal church

on, 735 Ziphias, in zoology, XIV 231. Zircon, XV. 87, XVII. 623—system of rings formed in, XVI. 652.

Zirconia, XV 65 Zirconium, VI. 488. Zirmie, XI 778 ZISKA (John), XXI 972. ZITTAU, in Saxony, XXI 972.

ZNAIM, town in Austria, XXI 972. Zoarces, genus of fishes, XII 310. Zoba'ah, Egyptian whirlwind, VIII 422. ZODIAC, XXI. 972-signs of the, IV. 12. 80

Zodiacal light, IV 31. Zodion, genus of insects, IX. 244. Zoisite, mineral, XV. 85 ZOLLVEREIN, XXI 972; IX. 401; XI. 212;

XVIII, 658. ZOWBOR, town in Hungary, XXI. 972. See Sombor.

ZONARAS (Joannes), XXI 972—on the burning glasses of Archimedes, VI. 4. Zones of the earth, X. 483—of terrestrial vegetation, V. 225, 226; XVII. 626of marine vegetation, V. 229; XVII.

Zonitis, genus of insects, IX. 136 Zoocarpes, III. 200, 204.

Zoology, XXI 672, III. 168-its subjects immensely increased by paleontology, XVII. 91—of Egypt, VIII. 431—Canary Islands, VI. 164—Scotland, XIX. 798. See the different countries, and the articles referred to in vol. III. 193; also Physical Geography, Animals, Comparative Anatomy, Palæontology, &c., &c. Zoonomy, II. 748.

Zoophaga, bones of the, III. 75 et seg.—teeth, 105, 106.

Zoophorus, in architecture, UL 514. ZOOPHYTES, XXI. 973; II. 772; III. 169— characteristics of, 184—of Africa, II.

Zoosperma, animalcules, III. 203 n. Zoospores, V. 143, 147. Zootomy, II. 748. Zophosis, genus of insects, IX, 129, Zorn (J. H.), on birds, XVI. 728.

Zorndorf, battle of, XVIII. 653. ZOROASTER, XXI. 1009; XIII. 810; XVII. 483, 435—Anquetil's publication of frag-ments ascribed to, III. 259.

Zoromania, African people, XI. 778. Zosmus, historian, XXI. 1009. Zonaves, XIX. 503—at the battle of Alma,

Zouga, African river, IL 211. Zoutman (Admiral), V. 496. ZSCHOKKE (J. H. Daniel), German writer, XXI. 1009. Zuboff (Plato), XIX. 489 et seq.

Zucchi (Father), not the inventor of the reflecting telescope, XVI. 533.
Zuela, town in Fezzan, IX. 530.
Zug, Swiss canton, XXI. 1010; XX. 882.
ZUIDER ZEE, XXI. 1010; XI. 581. Zullichau, Prussian town, XXI. 1010. Zulu Kafirs, XIII. 32, 86; XV. 808,

804. Zumalacarregui (Don Thomas), XX. 478,

Zumpango, lake, XIV. 722. Zumpr (Carl Gottlob), XXI. 1010.

## ZUN-ZUR

Zundererz, mineral, XV. 122. Zurbano (General), XX. 482. ZURBARAN (Francisco), Spanish painter, XXI. 1010.

XXI. 1010.

ZURICH, in Switzerland, XXI. 1011; XX. 882—Lake of, 889—silk manufacture, 278—libraries, XIII. 424—university of, XXI. 492—water machine, XII. 182.

## ZUT-ZWI

ZUTPHEN, in Holland, XXI. 1011. ZVORNICK, town in Turkey, XXI. 1011. ZWEIBRUCKEN, XXI. 1012. See Deux Ponts.

Zwickau, town in Saxony, XXI. 1012. Zwieselite, mineral, XV. 101. Zwingli (Ulrich), XXI. 1012; XIII 726-Luther's controversy with, 736-confer-

## ZWO-ZYG

ence between Luther and, 1b.; XVIII 822—his share in effecting the Reformation, 821 et seq ZWOLLE, town in Holland, XXI. 1012 Zygadıte, mineral, XV. 72. Zygæna, genus of fishes, XII. 325—fossil, 341.

- genus of insects, IX 210.

## ZYG-ZYG

Zygænides, family of insects, IX. 210. Zygænidæ, family of fishes, XII. 325. Zygobates, genus of fossil fishes, XII. 342 ; XVII. 719. Zygophyllaceæ, nat. order of plants, V.

188

Zygops, genus of insects, IX 140. Zygosaurus, fossil reptile, XVII. 139.

THE END.